DOCUMENT RESUME

ED 187 952 CE 025 683

TITLE	Agricultural Marketing. Instructor's Guide. Volume 12, Number 9. Agdex 810, Catalog Number AG-81-I.
INSTITUTION	Missouri Univ., Columbia. Instructional Materials Lab.
PUB DATE	79
NOTE	214p.: For related documents see CE 025 682.
AVAILABLE FROM	Instructional Materials Laboratory, 10 Industrial Education Building, University of Missouri--Columbia, Columbia, MO ($8.00)
EDRS PRICE	MF01/PC09 Plus Postage.
DESCRIPTORS	Agribusiness; *Agricultural Education; *Dairy Farmers; *Grains (Food); Instructional Materials; Learning Activities; Learning Modules; *Livestock; *Marketing; Teaching Guides; *Vocational Education

ABSTRACT

This instructor's guide contains twenty lessons for teaching a curriculum unit in agricultural marketing. Each lesson includes the following instructional elements: objectives, study questions, references, teaching procedures, transparency masters, exams, and answer keys. The lessons cover the following questions: (1) What is marketing? (2) What are goals of the marketing system? (3) How do cash grain markets operate? (4) How does grain grading affect price? (5) How can I market grain with a protected price? (6) What are some alternative grain marketing methods? (7) How can futures markets aid in the marketing of grain? (8) What is the significance of marketing trends in livestock? (9) How are cattle prices determined? (10) How is the value of market hogs determined? (11) What is involved in marketing livestock by the carcass weight and grade method? (12) What is involved in the marketing of feeder cattle and feeder pigs? (13) How can I market livestock with a protected price? (14) What is the use of the futures market in livestock marketing? (15) Why is basis so important? (16) What are some alternative livestock marketing methods? (17) What are marketing and pricing methods of milk? (18) How are dairy products marketed? (19) How is the fluid and blend price for milk determined? and (20) What marketing decisions are faced by the milk producer? (BM)

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INSTRUCTOR'S GUIDE

AGRICULTURAL MARKETING

Robert Denker
Agricultural Education
University of Missouri-Columbia

Volume 12
Number 9

Produced by the Instructional Materials Laboratory
University of Missouri-Columbia
Columbia, Missouri
Agdex 810
Catalog Number AG-81-I
September 1979

CE 025 683

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Foreword

This curriculum unit in Agricultural Marketing is an important addition to the courses available in Vocational Agriculture. Some vocational agriculture instructors will want to include Marketing as part of the Agricultural Management course; while others may include appropriate marketing lessons in Livestock Production, Crop Production, etc.

Much of this material should be valuable in conducting young/adult farmer classes in marketing.

A separate publication, "Student Reference in Agricultural Marketing," should be secured in class quantities for use with the lessons in this unit.

Teachers should make every effort to keep the lessons "practical" and of the type that will help students in making decisions about marketing livestock, crops, and products from their SOE programs and/or on their home farm. Obviously, the student planning employment in an agriculture business that buys from or sells to farmers will need the same type information to be of service to customers.

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Acknowledgements

Many individuals contributed to the development of this curriculum unit in Agricultural Marketing. The MVATA Teaching Aids Committee suggested the Lesson breakdown and the areas to be included in the unit. Members of the inservice class, Ag Econ 310D, Cameron, 1977, contributed suggestions and alternative methods for improvement of the unit.

The following staff in Agricultural Economics, University of Missouri - Columbia, provided technical information, reviewed the material and offered suggestions in the respective areas: Grain Marketing, Dr. Richard Rudel; Livestock Marketing, Dr. Glenn Grimes; Dairy Marketing, Dr.Stephen Whitted; and Introductory Lessons, Dr. Joseph Meisner. Credit should be given to the 1975 Handbook of Agriculture Charts, U. S. D. A. for some of the charts used in this guide.

Larry Bennett, Graduate Assistant, assisted in the final development and in the dividing of the unit into additional lessons.

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SUPPLEMENTARY REFERENCES*

The following is a partial list of reference material in Agricultural Marketing. Teachers may want to obtain selected items prior to teaching the marketing unit.

1. Set of Commodity Price Charts plus monthly up-date card. Farm Credit Banks of Wichita, 151 North Main, Wichita, KS 67202 (free).

2. Obtain the following from:

   Chicago Mercantile Exchange
   Public Information, Department N
   444 West Jackson Street
   Chicago, IL 60606

   a. Contract Specifications (circular), Chicago Mercantile Exchange. (free)

   b. Fundamental Factors (circular), Chicago Mercantile Exchange. (free)

   c. Trading In Tomorrows (circular), Chicago Mercantile Exchange. (free)

   d. The Banker and Hedging (circular), Chicago Mercantile Exchange. (free)

   e. Bibliography and Source Text (circular), Chicago Mercantile Exchange. (free)

3. Hedging, Forward Contracting, and Agricultural Credit. University Bulletin, South Dakota State University, Brooking, South Dakota.

4. Publication List. Chicago Board of Trade, 141 West Jackson Street, Chicago, IL. 60604.

5. Publication List. Mid-America Commodity Exchange, 175 West Jackson Street, Chigago IL 60604.

6. Daily Market Summary, Marketing Division, Missouri Department of Agriculture, Jefferson City, MO 65101.

7. Profit Marketing. Doane's Agricultural Service, 8900 Manchester Road, St. Louis, MO 63144.

8. UMC Marketing Guides (200-299). University of Missouri Extension Service, Whitten Hall, Columbia, MO 65211.

9. Shepherd, Futrell, and Strain. Marketing Farm Products, Ames, Iowa. Iowa State University Press, 1976.

10. Agricultural Marketing Principles. (Ohio) available from Instructional Materials Laboratory, UMC, Columbia, MO (1972).

11. Obtain the following free crop and livestock reports from:

    Missouri Crop and Livestock Reporting Service
    P.O. Box L
    Columbia, MO 65201

    a. Bi-Weekly Crop and Livestock Reporter, Missouri Crop and Livestock Reporting Service.

    b. Annual Crop Summary and Crop Values, Missouri Crop and Livestock Reporting Service.

    c. Weekly Weather and Crop Report, Missouri Crop and Livestock Reporting Service.

    d. County Estimates of Crops, Missouri Crop and Livestock Reporting Service.

    e. Weekly Broiler and Poult Hatch, Missouri Crop and Livestock Reporting Service.

    f. Farm Facts, Missouri Crop and Livestock Reporting Service.

*Student reference material for this unit is provided in a separate publication. "Student Reference in Agricultural Marketing".

UNIT - MARKETING

Lesson 1 - What is Marketing?

Objective: Upon conclusion of this lesson, students will be able to set goals for a marketing program.

Study Questions:

1. What are some problems facing farmers in marketing?
2. What is the difference between marketing and selling?
3. What function does marketing perform?
4. What do we mean by marketing margin? Give examples.

Reference:

1. Student Reference in Agricultural Marketing
2. Transparencies
   a. TM-1: Marketing Functions
   b. TM-2: Marketing Margins on Beef
   c. TM-3: Beef Cut-out
   d. TM-4: Pork Cut-out
   e. TM-5: What the Food Dollar Pays For
   f. TM-6: Components of Bill for Marketing Farm Foods, 1974
   g. TM-7: Farm-food Marketing Bill and Consumer Food Expenditures
   h. TM-8: Food Expenditures - Income Trends

UNIT - MARKETING

Lesson 1 - What is Marketing?

TEACHING PROCEDURE

A. Review - (if applicable)

B. Motivation: Ask students what price they received for hogs they sold - or corn - or soybeans. Where did they sell? Have any contracted any livestock or crops? Ask them their definition of marketing?

C. Assignment

D. Supervised study

E. Discussion

1. Let students review some of the problems facing farmers in marketing. Point out that in one survey which asked farmers their main problem, over 60% indicated marketing. Students may suggest other problems. This series of lessons in this unit is to help them with some of these problems.

   What are some problems facing farmers in marketing?

   1) Specialized farming
   2) Food production is biological
   3) Farm products lack identity
   4) Different market systems for labor, farmers, etc.

2. After students give their definition of marketing - use TM-1 for additional discussion.

   What is the difference between marketing and selling?

   1) Marketing is all the steps in getting the product from the producer to the consumer, while selling is accepting the price offered at the time of production.

3. As students list the functions of marketing, uncover TM-1 to reinforce these points. Get examples of each and point out that each of these has a cost. Give examples of costs as local hog buying stations figure 25¢/cwt. for assembly, transportation of live hogs cost about 65¢/cwt. for 150 miles, packers figure about $25/head for dressing cattle, etc.

What function does marketing perform?

1) Assembly
2) Transporting
3) Processing
4) Packaging
5) Storage
6) Pricing
7) Financing
8) Promotion
9) Retailing
10) Etc.

4. Let the students give their definition of marketing margin. Have them discuss why they are getting wider, why they vary by products, and how more processing will increase them. This point - marketing margins - receives a lot of criticism and should be discussed fully. Also, show TM-2 to illustrate it on beef. TM-3 and TM-4 will point out a typical beef and pork cut-out. The differences in the farmer's share of the food dollar is on TM-5 for different products. TM-6 shows how the marketing dollar is divided, and TM-8 shows how the percent of income spent for food has decreased.

   What do we mean by marketing margin? Give examples.

   1) Marketing margin is the difference between the retail price and farm value

      a. Has been widening
      b. Varies by products
      c. Does not necessarily reflect farmer's profit
      d. Increased amount of processing desired by consumers is causing a wider margin

F. Summary

G. Exam and/or evaluation - Sample quiz available.

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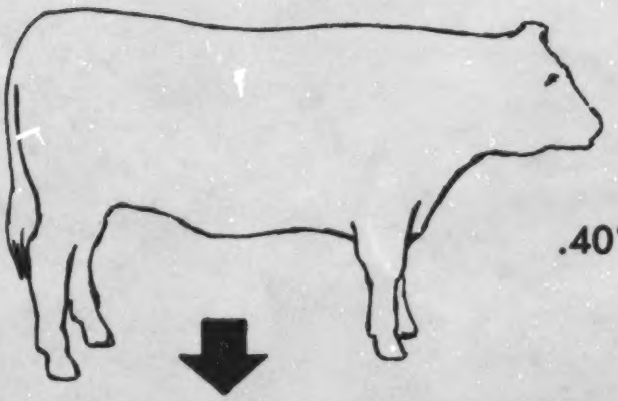
MARKETING FUNCTIONS

1. ASSEMBLY
2. TRANSPORTATION
3. PROCESSING
4. PACKAGING
5. STORAGE
6. PRICING
7. FINANCING
8. PROMOTION
9. RETAILING
10. ETC.

Marketing Margins on Beef

.40¢ steer - $2.00 steaks

1,000 pound
STEER

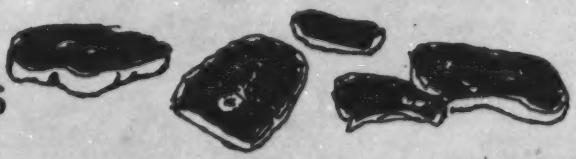


.40¢/pound

620 pound
CARCASS

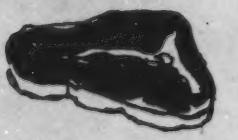
.64½¢/pound

440 pound
RETAIL CUTS



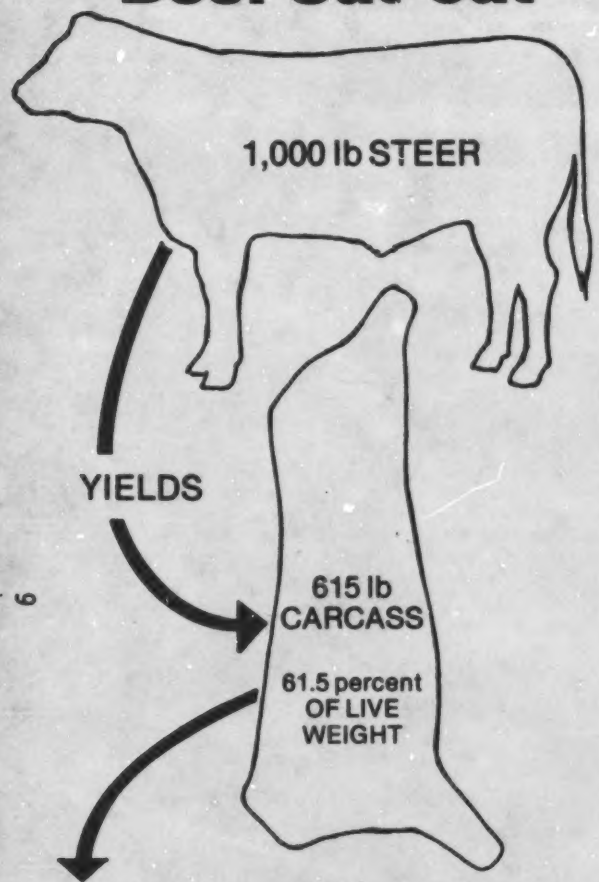
$1.40/pound

16 pound T-BONE



$2.00/pound

Beef Cut-out



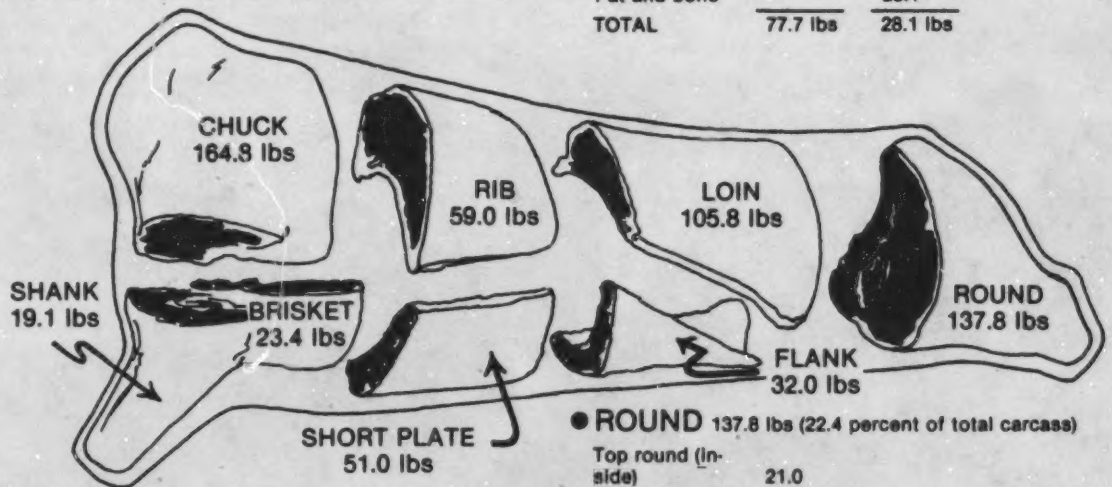
which the packer sells to a retailer who trims away 183 lbs of fat, bone, and waste...ends up with only 432 lbs of beef.

This does not include the variety meats-liver, heart, tongue, trip, sweetbreads and brains-which account for about 27 lbs.

These figures are averages. Carcass data varies according to cutting method and type of cattle.

	Saleable Beef-lbs	Other lbs
● CHUCK 164.8 lbs (26.8 percent of total carcass)		
Blade roast	59.3	
Stew or ground beef	32.1	
Arm pot-roast	22.3	
Cross rib pot-roast	20.6	
Fat and bone		30.5
TOTAL	134.3 lbs	30.5 lbs
● BRISKET 23.4 lbs (3.8 percent of total carcass)		
Boneless	9.4	
Fat and bone		14.0
TOTAL	9.4 lbs	14.0 lbs
● SHANK 19.1 lbs (3.1 percent of total carcass)		
● SHORT PLATE 51.0 lbs (8.3 percent of total carcass)		
Plate, stew, short ribs	40.8	
Fat and bone		10.2
TOTAL	40.8 lbs	10.2 lbs
● FLANK 32.0 lbs (5.2 percent of total carcass)		
Flank	3.2	
Ground beef	12.6	
Fat		16.2
TOTAL	15.8 lbs	16.2 lbs
● MISC. 22.1 lbs (3.6 percent of total carcass)		
Kidney, hanging tender	3.6	
Fat, suet, cutting losses		18.5
TOTAL	3.6 lbs	18.5 lbs

	Saleable Beef-lbs	Other lbs
● RIB 59.0 (9.6 percent of total carcass)		
Rib roast	24.2	
Rib steak	12.4	
Short ribs	4.7	
Braising beef	2.7	
Ground beef	3.5	
Fat and bone		11.5
TOTAL	47.5	11.5
● LOIN 105.8 lbs (17.2 percent of total carcass)		
Porterhouse steak	18.7	
T-bone steak	9.5	
Top Loin steak	5.2	
Sirloin steak	41.4	
Ground beef	2.9	
Fat and bone		28.1
TOTAL	77.7 lbs	28.1 lbs



	Saleable Beef-lbs	Other lbs
● ROUND 137.8 lbs (22.4 percent of total carcass)		
Top round (inside)	21.0	
Bottom round (outside)	20.3	
Tip	13.1	
Stew	8.3	
Rump	4.8	
Kabobs or cubes	2.1	
Ground Beef	14.2	
Fat and bone		54.0
TOTAL	83.8	54.0

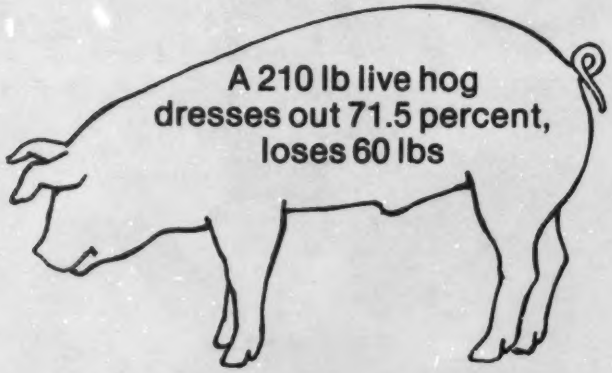
SUMMARY

(1,000 lb. choice steer)

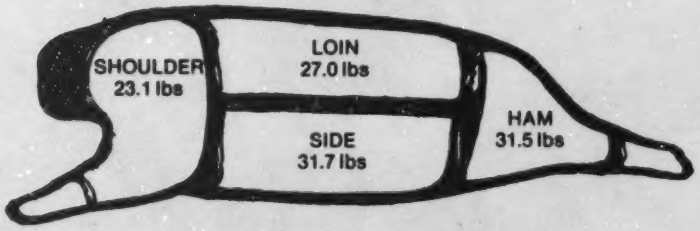
Dresses out 61.5 percent	615 lbs.
Fat, bone, loss	183 lbs.
Retail beef cuts	432 lbs.

TM-3

Pork Cut-out



Yields a 150 lb carcass



An additional 30 lbs of fat for lard, bones and waste further reduces this 150 lb carcass to only 120 lbs of saleable retail cuts--chops, hams, bacon, ribs and sausage--that the retailer wraps and puts on display in the meat case.

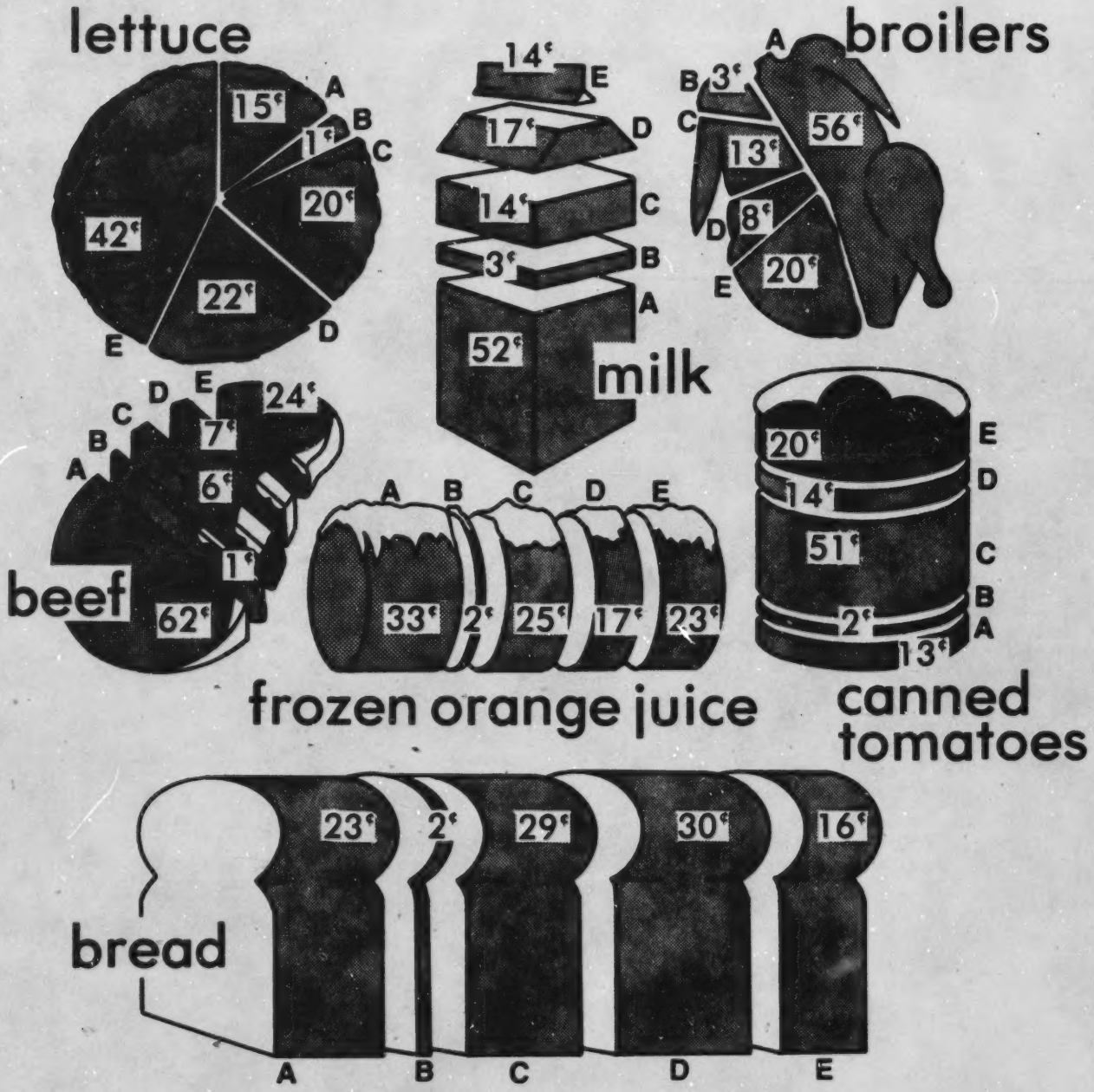
Figures are averages taken from actual cut out tests. Carcass data vary, depending on cutting method and type of hog.

	Saleable Pork Cuts-lb	Other lb	
● SHOULDER 23.1 lb (15.4 percent of total carcass)			
Boston shoulder	9.4		
Fat for lard		.5	
Picnic shoulder cubes	7.0		
Bone		2.8	
Hocks	3.4		
TOTAL	19.8	3.3	23.1 lb
● LOIN 27.0 lb (18.0 percent of total carcass)			
Blade roast (5 rib)	6.3		
Center chops	13.3		
Sirloin roast	4.2		
Fat for lard		3.2	
TOTAL	23.8 lb	3.2 lb	27.0 lb
● SIDE 31.7 lb (21.1 percent of total carcass)			
Bacon, cured	24.0		
Sausage trimmings	2.0		
Spareribs	5.7		
TOTAL	31.7 lb		31.7 lb
● HAM 31.5 lb (21.0 percent of total carcass)			
Boneless leg of pork	19.8		
Sausage trimmings	2.8		
Skin	2.2		
Fat for lard		3.2	
Bone and shrink		3.5	
TOTAL	24.8 lb	6.7 lb	31.5 lb
● MISC. 36.7 lb (24.5 percent of total carcass)			
Jowl, trimmed	4.5		
Feet, tail, neckbones	9.0		
Sausage trimmings	6.4		
Fat for lard		16.8	
TOTAL	19.9 lb	16.8 lb	36.7 lb

Total Saleable Pork Cuts	120.0 lb
Total Fat for Lard	23.7 lb
Bone and Shrink	6.3 lb
Total Carcass Weight	150.0 lb

TM-4

WHAT THE FOOD DOLLAR PAYS FOR



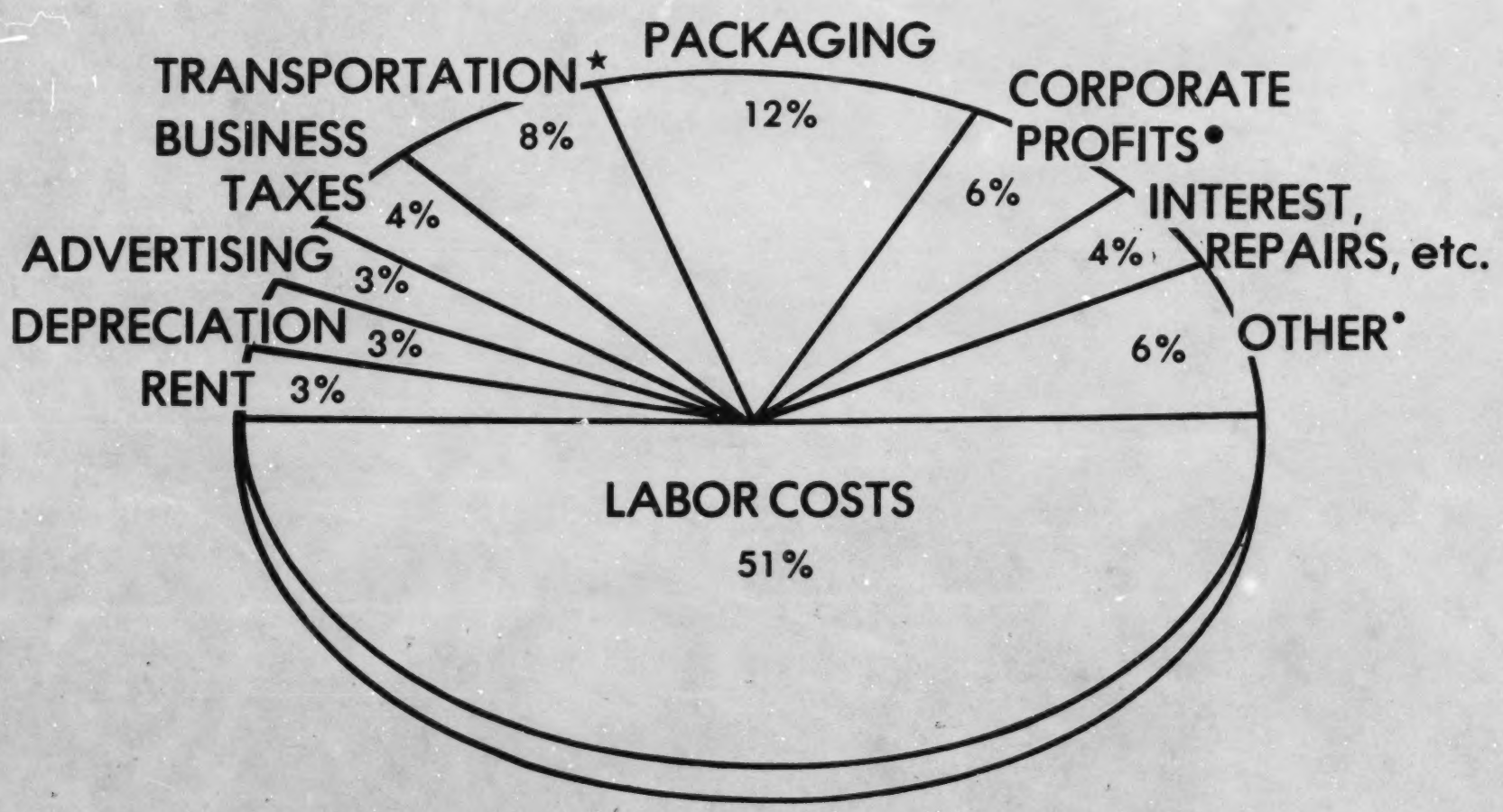
A - PRODUCTION B - ASSEMBLY C - PROCESSING

D - WHOLESALING, TRANSPORTATION

E - RETAILING

ESTIMATES ARE BASED ON 1974 PRICES, COSTS, AND MARGINS

COMPONENTS OF BILL FOR MARKETING FARM FOODS, 1974°



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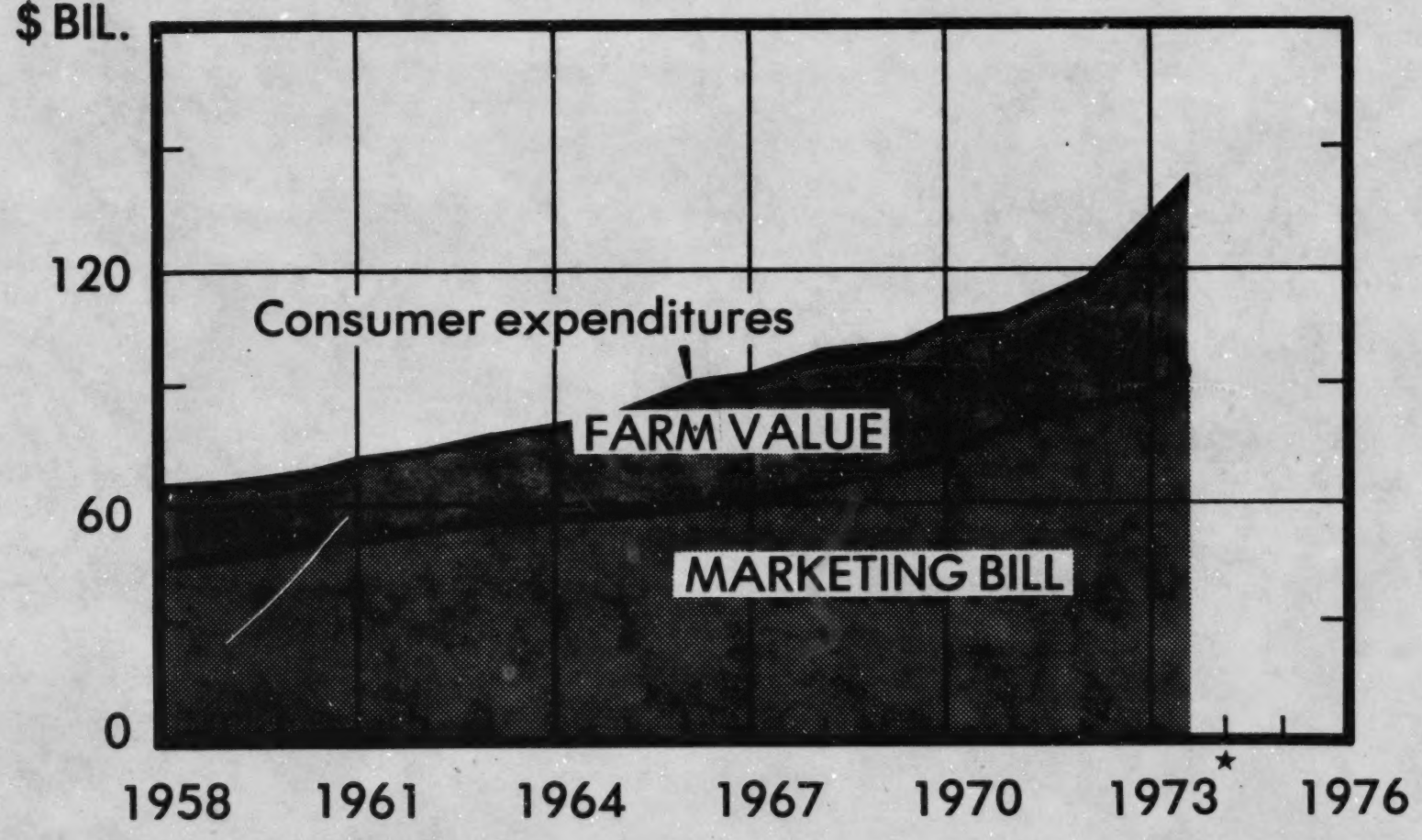
•RESIDUAL INCLUDES SUCH COSTS AS UTILITIES, FUEL, PROMOTION, LOCAL FOR-HIRE TRANSPORTATION, INSURANCE

● BEFORE TAXES
O PRELIMINARY DATA
★ INTERCITY RAIL AND TRUCK

TM-6

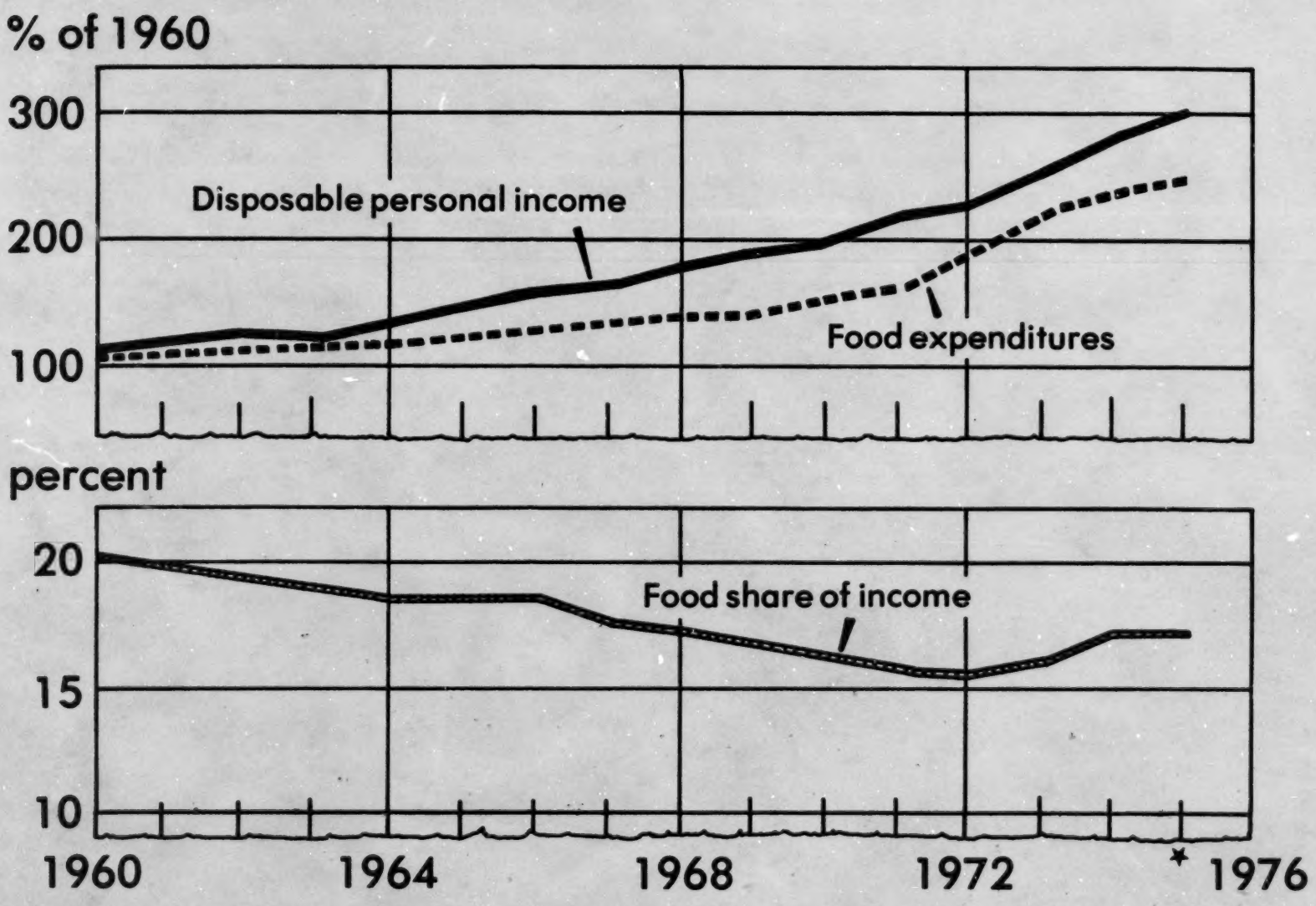
FARM-FOOD MARKETING BILL AND CONSUMER FOOD EXPENDITURES



FOR DOMESTIC FARM FOODS PURCHASED BY CIVILIAN CONSUMERS FOR CONSUMPTION BOTH AT HOME AND AWAY FROM HOME ★ PRELIMINARY

TM-7

FOOD EXPENDITURES-INCOME TRENDS



BASED ON DATA OF DEPARTMENT OF COMMERCE ★PRELIMINARY

TM-8

UNIT - MARKETING

Lesson 1 - What is Marketing?

EXAM

_____ 1. Price fluctuations have increased in recent years. True or False

_____ 2. Marketing can be defined as:

a. all the steps and processes involved in getting the product from the producer to the consumer.
b. delivering grain to an elevator.
c. receiving a larger share of the consumer's food dollar.
d. none of the above.

_____ 3. Farmer's income would be higher if they obtained a larger share of the consumer's food dollar. True or False

_____ 4. The amount of processing in a product affects the marketing margin. True or False

_____ 5. Agribusiness firms exert strong forces upon the type of market options open to farmers. True or False

_____ 6. Pricing is one function of marketing. True or False

_____ 7. The largest item in the marketing margin for farm products is:

a. transportation
b. advertising
c. labor costs
d. corporate profits
e. none of the above

_____ 8. Compared to 1960, the current percent of income spent for food in the United States is:

a. higher
b. lower
c. about the same

_ ___ 9. The percent of consumer's food dollar received by farmers is highest for:

a. bread
b. tomatoes
c. milk
d. beef
e. all about the same

_____10. T-Bone steak at $2.00 per pound when fat steers are 40¢ per pound is a good example of excessive profits for meat packers. True or False

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UNIT - MARKETING

Lesson 1 - What is Marketing?

ANSWERS TO EXAM

1. True
2. a
3. False (no relationship)
4. True
5. True
6. True
7. c
8. b
9. d
10. False

UNIT - MARKETING

Lesson 2 - What are goals of the marketing system

Objective: At the conclusion of this lesson, students will be able to establish a concept of marketing principles.

Study Questions:

1. What are some goals of a good marketing program?

   a. for a producer
   b. for an agribusiness firm
   c. for consumers

2. Where can I get market information?

References:

1. Student Reference in Agricultural Marketing

2. Handouts

   a. HO-1: List of Available Market Information

   b. HO-2: Estimated Carcass Value Based on Fabricated Beef Cuts

UNIT - MARKETING

Lesson 2 - What are goals of the marketing system?

TEACHING PROCEDURE

A. Review the functions of markets and marketing margin.

B. Motivation: Ask students how their parents market their farm products. How did the students market their SOEP projects? Should you use the same market again or search for a more competitive market? Where could you get reliable market information?

C. Make assignment

D. Supervised study

E. Discussion

1. These goals of the farmer, agribusiness firm, and consumer could be listed on the board under the three groups as students discuss them.

What are some goals of a good marketing program?

1) Farmers want a system that

a. treats them fairly.
b. provides adequate prices in view of costs.
c. reflects differences in quality.
d. rewards their contributions as much as marketing firms.
e. provides access to outlets.
f. provides choice between buyers.
g. provides ability to sell any amount and when desired.
h. provides sufficient and timely market information.
i. provides confidence in fairness of system.

2) Agribusiness firms want a system that

a. lets them grow in sales and profits.
b. provides security for the firm - stable prices and sales.
c. lets them develop market power through brand names, control of production, etc.
d. maintains a large supply of products - their profits may depend on volume rather than price.
e. provides timely and accurate market information.

1. Have students complete columns 3 and 4 on HO-2. Local prices at retail level could be substituted on Column 2. Students should understand that prices in Column 2 have to be at the level where all of the products will sell at about the same time.

2. A field trip to a local packing plant and/or grocery store could be conducted. Let them explain their pricing system and also explain how they decide what to buy and what to feature in "specials".

F. Summary

G. Exam and/or evaluation

LIST OF AVAILABLE MARKET INFORMATION

Title	Source	Remarks
Daily Market Summary	Mo. Dept. of Agric. Box 630 Jefferson City, MO	Free. Reports livestock & grain cash & futures markets daily.
Crop & Livestock Reporter	Agric. Statistician Box L Columbia, MO	Free. Reports results of surveys as cattle on feed, pig crop report, etc. Bi-weekly.
Agricultural Outlook Letters	Agri. Economics 200 Mumford Hall Columbia, MO	Free. Issued periodically on most commodities.
Doane's Agricultural Report	Doane's Agri Service 8900 Manchester Road St. Louis, MO	$24.50/yr. Outlook information plus management suggestions.
Wall Street Journal		

List of special reports available:

Crop Reporting Board, Statistical Reporting Service, USDA, Washington, D.C.
Information Division, Agricultural Marketing Service, USDA, Washington, D.C.
Economic Research Service, Information Division, USDA, Washington, D.C.
Foreign Agriculture Service, Information Division, USDA, Washington, D.C.

March 24, 1977

ESTIMATED CARCASS VALUE BASED ON FABRICATED BEEF CUTS: Gross cut-out of Choice 3 600-700 lb. Beef carcasses based on following carlot prices of Choice fabricated beef cuts F.O.B. River basis per cwt is 65.52, week ago 65.75. Note: Based on average industry yields with no adjustment for packer processing costs.

	(1) Percent of Carcass	(2) Price FOB River Basis[1]	(3) # in 620# Carcass	(4) Value[2]
Rib, roast ready	5.82	1.42		
Brisket, bnls, deckle off	2.60	.73		
Armbone chuck bnls	23.32	.65		
Knuckle	3.14	.97		
Top inside round	5.48	1.05		
Bottom gooseneck rnd	7.06	.95		
Striploin, short cut bnls	3.71	1.86		
Top sirloin butt	3.38	1.40		
Bottom sirloin butt	2.03	.60		
Full tenderloin	1.92	2.10		
Flank steak	.48	1.50		
Steak tails	.83	.76		
Cap and wedge meat	.90	1.03		
50/50 trim	11.70	.23		
Hinging tender	.32	.33		
Bone-in short plate	8.00	.20		
Fat	6.43	.11		
Bones	12.10	.04		
Kidney	.25	.17		
Loss	.53	----		
		TOTAL		

[1] Missouri Daily Market Summary

[2] Wholesale Value
Column (3) = Column (1) x 620#
Column (4) = Column (3) x Column (2)

UNIT - MARKETING

Lesson 2 - What are goals of the marketing system?

EXAM

_____ 1. Marketing is concerned with selling:

a. all the way to the consumer
b. to first handlers
c. to the middle person
d. none of the above

_____ 2. The changing size of farms causes changes in marketing problems. True or False

_____ 3. A government storage program will increase price fluctuations of grain. True or False

_____ 4. Rise in exports is associated with the recent wild price fluctuations. True or False

_____ 5. An agribusiness firm's goals of marketing are the same as a farmers. True or False

_____ 6. An agribusiness firm aims for:

a. smaller, more stable sales
b. an uncontrolled market
c. a growing stream of profits and sales
d. all of the above

_____ 7. Consumers desire a marketing system that supplies adequate food at a reasonable cost. True or False

_____ 8. Good decisions in marketing are supported by:

a. sources of prices and marketing information
b. convenience of markets
c. your neighbors advice
d. all of the above

_____ 9. The USDA's agriculture marketing service reports are a good source for outlook information plus management suggestions. True or False

_____10. Farm magazines usually do not carry market information because they utilize all their space for innovations in agriculture. True or False

UNIT - MARKETING

Lesson 2 - What are goals of the marketing system?

ANSWERS TO EXAM

1. a
2. True
3. False
4. True
5. False
6. c
7. True
8. a
9. True
10. False

UNIT - MARKETING

Lesson 3 - How do cash grain markets operate?

Objective: At the conclusion of the lesson, students will be able to market cash grain.

Study Questions:

1. What cash markets are available for grain?
2. How does the elevator determine price?
3. What is the function of price in grain marketing?
4. Why do cash market prices fluctuate?
5. How do farmers adjust their operations as a result of price changes?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doanes
3. Transparency

   TM-9: Function of Price

UNIT - MARKETING

Lesson 3 - How do cash grain markets operate?

TEACHING PROCEDURE

A. Review the functions of markets - especially on assembly and transportation and tie in with marketing grain.

B. Motivation: Ask students where they sell their grain - prices received - discounts taken - etc.

C. Assignment: Have students study the handout to get answers to the questions. Special overnight assignments should also be given: have students check with local elevator, etc. on cash price for grain. Let the students report the next day.

D. Supervised study

E. Discussion

1. List the four cash markets on the board as students name them. Have them also give one or two examples of each of these where they could sell grain. If possible, give examples of current prices at each location and determine cost of marketing at each. (Frequently, farmers pay a high cost for convenience.)

What cash markets are available for grain?

1) Country elevator
2) Sub-terminal elevator
3) Terminal elevator
4) Transformer (processor, manufacturer, exporter)

2. Let students describe the procedure in the handout and have the students that called the local elevator report their findings. Compare this with the Daily Market Summary. Determine transportation, handling, and profit figure. If convenient, also check with an alternative market as terminal, exporter, etc. Work some actual examples - the local price varies by elevators, seasons, etc.

How does the elevator determine price?

1) Determines terminal elevator (or other market) price and deducts transportation, handling, and profit (about 20¢ for transportation, 8¢ for handling, 2¢ for profit in central Missouri in 1977)

2) Adjust the above bid considering competition, amount of grain being received, etc.
3) Terminal elevator protects itself by hedging or forward sales
4) Hedging price is basically determined by supply and demand - price rations the supply until the next harvest

3. Let students give the definition from the text. Use TM-9 to support the principle. Discuss how this works with corn, etc. and the effect of government programs as price supports.

What is the function of price in grain marketing?

1) Price has to be at the level that will let a large or small crop last until next harvest, but not leave a large surplus.

4. Have students think of factors other than these listed. During the discussion, divide these factors into three groups as suggested in the answer below.

Why do cash market prices fluctuate?

1) Change in supply
2) Change in demand
3) Imperfect information

5. Identify, with student input, different things farmers do to adjust their operations as a result of price.

How do farmers adjust their operations as a result of price changes?

1) Answer from examples in student reference.

FUNCTION OF PRICE

Price has to be at the level that will let a large or small crop last until next harvest, but not leave a large surplus.

UNIT - MARKETING

Lesson 3 - How do cash grain markets operate?

EXAM

_____ 1. The local elevator price of grain is based on the futures price. True or False

_____ 2. The function of price in grain marketing is to:

a. make a maximum profit for traders in the futures market
b. spread the use of the crop until the next harvest so there will be neither a shortage or surplus
c. make it possible for a farmer to receive a profit for storing grain
d. is determined by people in Washington
e. none of the above

_____ 3. The market price of a grain fluctuates because of:

a. change in supply of that grain or a competing product
b. change in demand
c. imperfect information
d. all of the above
e. none of the above

_____ 4. The cash price at a country elevator is generally the futures price minus the basis. True or False

_____ 5. If price is too low, in the judgement of people in the trade, speculators and others will sell futures contracts -- if too high, they buy futures contracts. True or False

_____ 6. The country elevator is the first tier in the marketing structure. True or False

_____ 7. Conditioning, storing, and reloading of grain is the main function of the:

a. country elevator
b. sub-terminal elevator
c. terminal elevator
d. transformation market
e. none of the above

_____ 8. An elevator that manufactures feed or sells grain locally for feed is an example of:

a. terminal
b. country
c. sub-terminal
d. none of the above

_____ 9. The cash market is where you take your grain and exchange it for dollars. True or False

_____ 10. The cash market which includes feed manufacturers, processors, and exporters is the:

a. country elevator
b. sub-terminal elevator
c. terminal elevators
d. none of the above

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UNIT - MARKETING

Lesson 3 - How do cash grain markets operate?

ANSWERS TO EXAM

1. True
2. b
3. d
4. True
5. False
6. True
7. b
8. b
9. True
10. d

UNIT - MARKETING

Lesson 4 - How does grain grading affect price?

Objective: At the conclusion of the lesson, students will be able to determine market price when provided grade information.

Study Questions:

1. How is grain graded and its affect on price?
2. What are some methods I can use to improve the cash price?
3. How can I determine whether to dry grain?
4. What is blending and how can I use it?

References:

1. Student Reference in Agricultural Marketing
2. UMC Guide - Forward Contracting No. 555
3. Transparency

   TM-10: Grain Grading Equipment

4. Handouts

   a. HO-3: Conversion Factors U.S. and Metric Units

   b. HO-4: Percentage Shrinkage When Grain is Dried to Specified Moisture Levels

   c. HO-5:

      1) Grade Requirements for Yellow Corn, White Corn and Mixed Corn

      2) Grade Requirements for Grain Sorghums

   d. HO-6: Corn - Scale of Discounts

   e. HO-7:

      1) Grade Requirements for all Classes of Wheat Except Mixed Wheat

      2) Grade Requirements for Soybeans

   f. HO-8: Milo -Scale of Discounts

g. HO-9: Wheat Discount Schedule

h. HO-10: Schedule of Discounts for Yellow Soybeans

i. HO-11: Grain Drying Problem

j. HO-12: Costs of Storage

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UNIT - MARKETING

Lesson 4 - How does grain grading affect price?

TEACHING PROCEDURE

A. Review cash markets and how market prices fluctuate.

B. Motivation: When I took my corn to market, I received $1.85 for corn, but the price was advertised at $2.00. Why didn't I receive the full amount? Has this ever happened to you?

C. Make assignment

D. Supervised study

E. Discussion

1. Have a sample of corn in class. Grade according to USDA standards on HO-5 and using the discount pages on HO-6, determine the price a farmer would receive for the corn. Point out the effect of garlic in wheat, foreign material in soybeans, etc. Teachers should secure copies of local discount tables also.

   How is grain graded and its effect on price?

   1) USDA grade
   2) Discount scale

2. Let students mention these points and then check some prices as suggested. Deduct extra costs and determine the "best" cash price today. List the other suggestions and discuss more thoroughly in questions 3 and 4.

   What are some methods I can use to improve the cash price?

   1) Check alternative cash bids and deduct associated costs
   2) Perform functions as drying and blending

3. Have students explain procedure and then work some examples. Point out that for some grains as shown on the discount scales on HO-8 the moisture discount is in excess of the general rule. Work some examples to determine whether or not to dry grain. (Use HO-11)

How can I determine whether to dry grain?

1) Determine discount for moisture
2) Determine weight loss due to drying from HO-4
3) Subtract step 2 from step 1 to get "return to drying"
4) Determine cost of drying
5) Determine most profitable route
6) Avoid over-drying
7) If planning to store, grain must be dried to hold condition

4. Discuss blending and work some examples (53# test weight corn mixed 1/2 and 1/2 with 57# test weight corn would give 55# test weight - no discount)

What is blending and how can I use it?

1) Mixing grain that will be discounted with above grade quality to avoid all of the discount
2) Blend on farm if available facilities
3) Check discount prices at various cash markets - some may perform this service indirectly

Other Activities:

1. Conduct a field trip to an elevator and let them demonstrate and discuss grading, blending, and pricing. Ask them to also discuss procedures farmers can use to improve prices.

F. Summary

G. Exam and/or evaluation - sample quiz available

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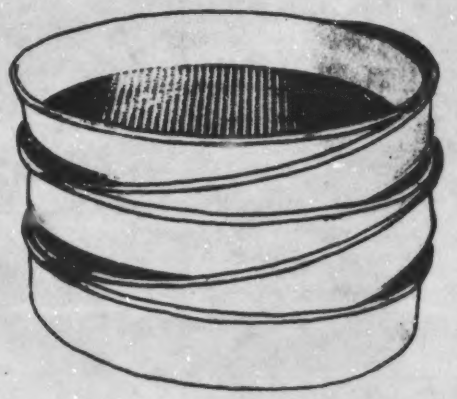
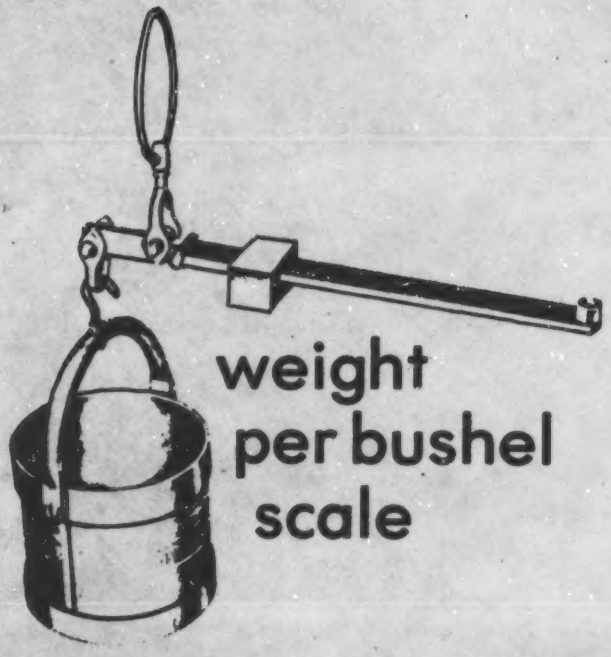
GRAIN GRADING EQUIPMENT

moisture tester

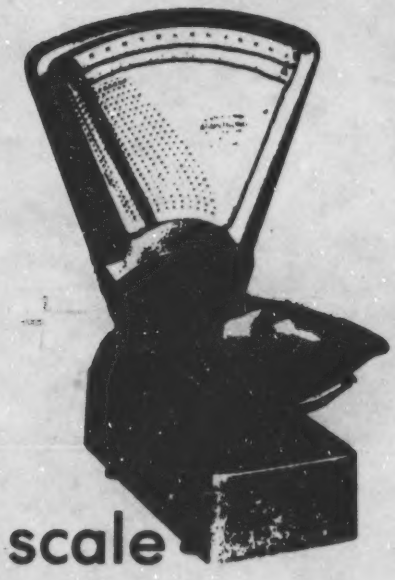
grain probe

dockage sieves





weight per bushel scale



dockage scale

CONVERSION FACTORS U.S. AND METRIC UNITS

U.S. to METRIC

LENGTH			
1 inch	=	25.4	millimetres
1 foot	=	0.3	metre
1 yard	=	0.9	metre
1 mile	=	1.6	kilometres
AREA			
1 sq. inch	=	6.5	sq. centimetres
1 sq. foot	=	0.09	sq. metre
1 sq. yard	=	0.8	sq. metre
1 acre	=	0.4	hectare
1 sq. mile	=	2.6	sq. kilometres
VOLUME			
1 cubic inch	=	16.4	cubic centimetres
1 cubic foot	=	0.03	cubic metre
1 cubic yard	=	0.76	cubic metre
1 teaspoon	=	5.0	millilitres
1 tablespoon	=	15.0	millilitres
1 fl. ounce	=	29.6	millilitres
1 cup	=	0.24	litre
1 pint (liq)	=	0.47	litre
1 quart (liq)	=	0.95	litre
1 gallon (liq)	=	0.004	cubic metre
1 peck	=	0.009	cubic metre
1 bushel	=	0.04	cubic metre
MASS			
1 grain	=	64.8	milligrams
1 ounce (dry)	=	28.3	grams
1 pound	=	0.45	kilogram
1 short ton	=	9.072	kilograms

Temperature of Fahrenheit x 5/9 after Subtracting 32° = °C.

METRIC to U.S.

LENGTH			
1 millimetre	=	0.04	inch
1 metre	=	3.3	feet
1 metre	=	1.1	yards
1 kilometre	=	0.6	mile
AREA			
1 sq. centimetre	=	0.16	sq. inch
1 sq. metre	=	11.0	sq. feet
1 sq. metre	=	1.2	sq. yards
1 hectare	=	2.5	acres
1 sq. kilometre	=	0.39	sq. mile
VOLUME			
1 cubic centimetre	=	0.06	cubic inch
1 cubic metre	=	35.0	cubic feet
1 cubic metre	=	1.3	cubic yards
1 millilitre	=	0.2	teaspoon
1 millilitre	=	0.07	tablespoon
1 millilitre	=	0.03	ounce
1 litre	=	4.2	cups
1 litre	=	2.1	pints (liq)
1 litre	=	1.1	quarts (liq)
1 cubic metre	=	264.0	gallons (liq)
1 cubic metre	=	113.0	pecks
1 cubic metre	=	28.0	bushels
MASS			
1 milligram	=	0.015	grain
1 gram	=	0.035	ounce (dry)
1 kilogram	=	2.2	pounds
1 metric ton	=	1.102	tons (short)

Temperature °C Celsius x 9/5 and add 32° = °F

Tons to Bushels Conversion

Conversion factors by grain:

Grain	Short	Metric	Long
Wheat	33.333	36.743	37.333
Corn	35.714	39.368	40.000
Soybean	33.333	36.743	37.333
Barley	41.667	45.929	46.667
Oats	62.500	68.894	70.000

Wheat	60 lbs. per bu.
Soybeans	60 lbs. per bu.
Corn	56 lbs. per bu.
Barley	48 lbs. per bu.
Oats	32 lbs. per bu.

A Short Ton is 2000 pounds.
A Metric Ton is 2204.6 pounds.
A Long Ton is 2240 pounds.

for a Quick Visual Comparison

A copy of this page and the grain grading charts are available from Seedburo for the asking. Write to:

Seedburo Equipment Co.
1022 W. Jackson
Chicago, Ill. 60607

PERCENTAGE SHRINKAGE WHEN GRAIN IS DRIED TO SPECIFIED MOISTURE LEVELS*

Initial moisture level	Shrinkage when grain is dried to:					
	13%	13.5%	14%	14.5%	15%	15.5%
%	%	%	%	%	%	%
13.0	0	0	0	0	0	0
13.5	1.07	0	0	0	0	0
14.0	1.65	1.08	0	0	0	0
14.5	2.22	1.66	1.08	0	0	0
15.0	2.80	2.23	1.66	1.09	0	0
15.5	3.37	2.81	2.24	1.67	1.09	0
16.0	3.95	3.39	2.83	2.25	1.68	1.09
16.5	4.52	3.97	3.41	2.84	2.26	1.68
17.0	5.10	4.55	3.99	3.42	2.85	2.28
17.5	5.67	5.12	4.57	4.01	3.44	2.87
18.0	6.25	5.70	5.15	4.59	4.03	3.46
18.5	6.82	6.28	5.73	5.18	4.62	4.05
19.0	7.40	6.86	6.31	5.76	5.21	4.64
19.5	7.97	7.44	6.90	6.35	5.79	5.23
20.0	8.55	8.01	7.48	6.93	6.38	5.83
20.5	9.12	8.59	8.06	7.52	6.97	6.42
21.0	9.70	9.17	8.64	8.10	7.56	7.01
21.5	10.27	9.75	9.22	8.69	8.15	7.60
22.0	10.84	10.33	9.80	9.27	8.74	8.19
22.5	11.42	10.90	10.38	9.86	9.32	8.78
23.0	11.99	11.48	10.97	10.44	9.91	9.38
23.5	12.57	12.06	11.55	11.03	10.50	9.97
24.0	13.14	12.64	12.13	11.61	11.09	10.56
24.5	13.72	13.22	12.71	12.20	11.68	11.15
25.0	14.29	13.79	13.29	12.78	12.26	11.74
25.5	14.87	14.37	13.87	13.37	12.85	12.33
26.0	15.44	14.95	14.45	13.95	13.44	12.93
26.5	16.02	15.53	15.03	14.54	14.03	13.52
27.0	16.59	16.11	15.62	15.12	14.62	14.11
27.5	17.17	16.68	16.20	15.70	15.21	14.70
28.0	17.74	17.26	16.78	16.29	15.79	15.29
28.5	18.32	17.84	17.36	16.87	16.38	15.88
29.0	18.89	18.42	17.94	17.46	16.97	16.48
29.5	19.47	19.00	18.52	18.04	17.56	17.07
30.0	20.04	19.58	19.10	18.63	18.15	17.66
30.5	20.61	20.15	19.69	19.21	18.74	18.25

*Formulas:

(1) Shrinkage = 100% minus $\frac{\%\text{D.M. wet grain}}{\%\text{D.M. dry grain}} \times 100 + 5\%$ (handling shrink)

(2) Value of shrink = price basis grade x shrinkage

(3) Return to drying = discount minus value of shrink

GRADE REQUIREMENTS FOR YELLOW CORN, WHITE CORN, AND MIXED CORN

Grade	Minimum test weight per bu.	MAXIMUM LIMITS OF --			
		Moisture	Cracked corn & foreign material	Damaged kernels	
				Total	Heat-damaged
	lbs.	%	%	%	%
1	56	14.0	2	3	.1
2	54	15.5	3	5	.2
3	52	17.5	4	7	.5
4	49	20.0	5	10	1.0
5	46	23.0	7	15	3.0

Sample: Sample grade shall be corn which does not meet the requirements for any of the grades for No. 1 to No. 5, inclusive; or which contains stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor; or which is otherwise of distinctly low quality.

GRADE REQUIREMENTS FOR GRAIN SORGHUMS

Grade	Minimum test weight per bu.	MAXIMUM LIMITS OF --			
		Moisture	Damaged kernels		Broken kernels, foreign materials & other grains
			Total	Heat-damaged kernels	
	lbs.	%	%	%	%
1	57	13	2	.2	4
2	55	14	5	.5	8
3*	53	15	10	1.0	12
4	51	18	15	3.0	15

Sample: Sample grade shall be grain sorghums which do not meet the requirements of any of the grades from No. 1 to No. 4, inclusive; or which contain stones; or which is musty, or sour, or heating, or which are badly weathered; or which have any commercially objectionable foreign odor except of smut; or which are otherwise of distinctly low quality.

*Grain sorghum which is distinctly discolored shall not be graded higher than No. 3.

CORN - SCALE OF DISCOUNTS

Subject to Change Without Notice
Applicable on No. 2 or Better Yellow Corn

TEST WEIGHT: 1 cent per bushel for each pound or fraction thereof under 54 pounds to 52 pounds. Then 2 cents per bushel for each pound or fraction thereof.

MOISTURE:

15.5% or less.....	-
15.6% to 16.0% inclusive.....	1% of Contract Price
16.1% to 16.5% inclusive.....	2%
16.6% to 17.0% inclusive.....	3%
17.1% to 17.5% inclusive.....	4%
17.6% to 18.0% inclusive.....	5%
18.1% to 18.5% inclusive.....	6%
18.6% to 19.0% inclusive.....	7%
19.1% to 19.5% inclusive.....	8%
19.6% to 20.0% inclusive.....	9%
20.1% to 20.5% inclusive.....	10%
20.6% to 21.0% inclusive.....	11%
21.1% to 21.5% inclusive.....	12%
21.6% to 22.0% inclusive.....	13%
22.1% to 22.5% inclusive.....	14%
22.6% to 23.0% inclusive.....	15%

DAMAGE: 1 cent per bushel for each 1% or fraction thereof in excess of 5% to 10%, then 2¢ per bushel for each 1% to a maximum of 15%.

FOREIGN MATERIAL: 1 1/2 cents per bushel for each 1% or fraction thereof in excess of 3% to 5%, then 3 cents per bushel for each 1% or fraction thereof to a maximum of 7%.

MUSTY: 5 cents per bushel

SOUR: 10 cents per bushel

HEATING: 10 cents per bushel

WEEVILY 2 cents per bushel

HEAT DAMAGE: 2 cents per bushel each 1/2% up to 3% - Maximum 3%.

WHEAT: GRADE REQUIREMENTS FOR ALL CLASSES OF WHEAT EXCEPT MIXED WHEAT[a]

GRADE	MINIMUM TEST WEIGHT PER BUSHEL		MAXIMUM LIMITS OF DEFECTS					WHEAT OTHER CLASSES[b]	
	Hard Red Spring Wheat (lb.)	All Other Classes (lb.)	Heat-Damaged Kernels (%)	Damaged Kernels (Total) (%)	Foreign Material (%)	Shrunken and Broken Kernels (%)	Defects (Total) (%)	Contrasting Classes (%)	Wheat Other Classes (Total) (%)
1	58	60	0.1	2	0.5	3	3	0.5	3
2	57	58	0.2	4	1.0	5	5	1.0	5
3	55	56	0.5	7	2.0	8	8	2.0	10
4	53	54	1.0	10	3.0	12	12	10.0	10
5	50	51	3.0	15	5.0	20	20	10.0	10

[a]Sample Grade: Sample grade is wheat that does not meet the requirements for any grades from No. 1 to No. 5 inclusive; or which contains stones; or which is musty, sour, or heating; or which has any commerically objectionable foreign odor except of smut or garlic; or which contains a quantity of smut so great that any one or more of the grade requirements cannot be applied accurately; or which is otherwise of distinctly low quality.

[b]Red durum wheat of any grade may contain not more than 10 percent of wheat of other classes.

GRADE REQUIREMENTS FOR SOYBEANS

Grade	Minimum test weight per bu.	MAXIMUM LIMITS OF --					
		Moisture	Splits	Damaged kernels: Total	Damaged kernels: Heat-damaged	Foreign material	Brown, black &/or bicolored beans in yellow or green beans
	lbs.	%	%	%	%	%	%
1	56	13.0	10	2.0	.2	1.0	1.0
2	54	14.0	20	3.0	.5	2.0	2.0
3*	52	16.0	30	5.0	1.0	3.0	5.0
4**	49	18.0	40	8.0	3.0	5.0	10.0

Sample: Sample grade shall be soybeans which do not meet the requirements for any of the the grades from No. 1 to No. 4, inclusive; or which are musty, sour, or heating; or which have any commercially objectionable foreign odor; or which contain stones; or which are otherwise of distinctly low quality.

*Soybeans which are purple mottled or stained shall be graded not higher than No. 3.

**Soybeans which are materially weathered shall be graded not higher than No. 4.

MILO - SCALE OF DISCOUNTS

Subject to Change Without Notice

Applicable on No. 2 or Better Yellow Milo

TEST WEIGHT DISCOUNTS	PER CWT.
55.0 or Above	.00%
54.9 to 54.0	.50
53.9 to 53.0	1.00
52.9 to 52.0	1.50
51.9 to 51.0	2.00
50.9 to 50.0	2.50
49.9 to 49.0	3.00
48.9 to 48.0	3.50
47.9 to 47.0	4.00

FOREIGN MATERIAL DISCOUNTS	PER CWT.
Up to 8.00	.00%
8.01 to 9.00	.50
9.01 to 10.00	1.00
10.01 to 11.00	1.50
11.01 to 12.00	2.00
12.01 to 13.00	2.50
13.01 to 14.00	3.00
14.01 to 15.00	3.50

DAMAGE DISCOUNTS	PER CWT.
	.00%
5.01 to 6.00	.50
6.01 to 7.00	1.00
7.01 to 8.00	1.50
8.01 to 9.00	2.00
9.01 to 10.00	2.50

MOISTURE DISCOUNTS	PER CWT.
Up to 14.00	.00%
14.01 to 14.50	1.25
14.51 to 15.00	2.50
15.01 to 15.50	3.75
15.51 to 16.00	5.00
16.01 to 16.50	6.25
16.51 to 17.00	7.50
17.01 to 17.50	8.75
17.51 to 18.00	10.00
18.01 to 18.50	11.25
18.51 to 19.00	12.50
19.01 to 19.50	13.75
19.51 to 20.00	15.00
20.01 to 20.50	16.25
20.51 to 21.00	17.50
21.01 to 21.50	18.75
21.51 to 22.00	20.00
22.01 to 22.50	21.25
22.51 to 23.00	22.50
23.01 to 23.50	23.75
23.51 to 24.00	25.00
24.01 to 24.50	26.25
24.51 to 25.00	27.50

SPECIAL DISCOUNTS	PER CWT.
Discolored	.75%
Musty	1.75
Hot/Heating	3.00
Sour	2.50

DOCKAGE - ALL DOCKAGE IN EXCESS OF 1.00% WILL BE DEDUCTED FROM GROSS WEIGHT

WHEAT DISCOUNT SCHEDULE

Applicable to wheat grading less than #2 Soft Red or Hard/Yelo Hard Winter for 1977 crop. (SUBJECT TO CHANGE WITHOUT NOTICE.)

TEST WEIGHT	:	1¢ each 1/2 pound test under 58 to 54 pounds 1 1/2¢ each 1/2 pound test under 54 pounds
MOISTURE	:	1% of contract price each 1/2% over 13.5%
DAMAGE	:	1¢ each 1% over 4 to ¢5 2¢ each 1% over 6 to 10%
HEAT DAMAGE	:	4¢ each 1% up to 3%
GARLICKY	:	2 to to Bulblets per 1000 grams - .20¢ per bushel 11 to 25 Bulblets per 1000 grams - .40¢ per bushel 26 to 50 Bulblets per 1000 grams - .60¢ per bushel 51 to 100 Bulblets per 1000 grams - .75¢ per bushel Over 100 Bulblets per 1000 grams - $1.00 per bushel
WEEVILY	:	2¢ per bushel
LIGHT SMUT	:	5¢ per bushel
SMUTTY	:	10¢ per bushel (Heavy smut by agreement only)
SHRUNKEN/BROKEN	:	2¢ per bushel each 1% over 5%
FOREIGN MATERIAL	:	2¢ per bushel each 1% over 1 to 5%
DOCKAGE	:	To be deducted from gross weight
MUSTY	:	5¢ per bushel
HEATING	:	10¢ per bushel
SOUR	:	10¢ per bushel
SOFT MIXED	:	1¢ per bushel each 5% soft mixed under 95%
HARD MIXED	:	2¢ per bushel if 90 to 94.9% hard mixed 1¢ per bushel each 5% hard mixed under 90%

E.&O.E.

SCHEDULE OF DISCOUNTS FOR YELLOW SOYBEANS

Subject to Change Without Notice

TEST WEIGHT DISCOUNT	Per.Bu.	MOISTURE DISCOUNT	SPLITS DISCOUNT	Per.Bu.	DAMAGE DISCOUNT	Heat Damage Per.Bu.	Other Damage Per.Bu.
54# or more	. .	1% of CONTRACT	20.0% or less	. .	.0% to .2%	. .	. .
53.9 to 53	1¢	PRICE for each	20.1 to 25%	1/4c	.3 to 1.0	2c	. .
52.9 to 52	2¢	1/2% of Mois-	25.1 to 30	1/2c	1.1 to 1.5	4c	. .
51.9 to 51	4¢	ture or frac-	30.1 to 35	3/4c	1.6 to 2.0	6c	. .
50.9 to 50	6¢	tion thereof	35.1 to 40	1c	2.1 to 2.5	8c	2c
49.9 to 49	10¢	over 13.0%			2.6 to 3.0	10c	2c
					3.1 to 3.5	NOTE	4c
					3.6 to 4.0		4c
					4.1 to 4.5		6c
					4.6 to 5.0		6c
					5.1 to 5.5		8c
					5.6 to 6.0		10c
					6.1 to 6.5		12c
					6.6 to 7.0		14c
					7.1 to 7.5		16c
					7.6 to 8.0		18c
Under 49 lbs Subject Rejection or Discount on Merit			Over 40% Subject Rejection or Discount on Merit		NOTE Over 8% damage or 3% heat damage subject to rejection.		

FOREIGN MATERIAL: All foreign material in excess of 1% shall be deducted from the gross weight and will not be paid for.

IN ADDITION TO ALL OTHER DISCOUNTS, THESE WILL APPLY: Musty 5c, Sour 5c, Heating 5c, Hot 10c, Materially weathered 3c

SOYBEANS NOT GRADING WITHIN ABOVE LIMITS WILL BE SUBJECT TO NEGOTIATION BETWEEN BUYER AND SELLER, BUYER RESERVES THE RIGHT TO REJECT ANY SAMPLE GRADE SOYBEANS OR SOYBEANS OF DISTINCTLY LOW QUALITY.

SOYBEANS CONTAINING ANY TOXIC MATERIAL WILL BE REJECTED.

SOYBEANS CONTAINING CROTALARIA WILL BE REJECTED.

67

HO-10

55

54

GRAIN DRYING PROBLEM

I. Value of Drying Crop

1. Moisture in Grain: _____

2. Moisture Base: _____

3. Moisture Discount:
[(Line 1 - Line 2) ÷.5)] _____

4. Price of Dry Grain: _____

5. Value of Discount:
(Line 3 x Line 4) _____

6. Price of Wet Grain: _____

II. Cost of Drying

7. Amount of Weight Loss:
(Use HO-4 to determine weight shrink--as an example, 24% grain dried to 13% has a 13.4 weight loss.) _____

8. Value of Weight Loss:
(Line 4 x Line 7) _____

9. Charge for Drying:
(2¢/point or own figure)
(Line 1 - Line 2 x .02) _____

10. Total Cost of Drying
(Line 8 + Line 9) _____

NOTE: If Line 5 is larger than line 10; it pays to dry prior to selling.

COSTS OF STORAGE[1]

I. Fixed Costs[2] (total bin costs for 1 year)

1. Interest on facilities (average investment x 10%) _____

2. Depreciation (cost of bin ÷ life in years) _____

3. Insurance (about 1% of original costs) _____

4. Taxes (about 1% of original costs) _____

5. Total Fixed Costs _____

6. Total Fixed Costs/Bu. Used _____

II. Variable Costs (per bushel)

7. Shrinkage (about 1%--not including drying loss) _____

8. Interest on grain (about 10% x price per bushel for annual costs) _____

9. Moving grain (about 2¢ per bushel) _____

10. Total Variable Costs Per Bushel _____

11. Total Costs _____

12. Expected Price Increase[3] _____

[1]It is suggested that costs be calcualted for a bin used at 100% capacity, 75% capacity, and 50% capacity.

[2]If actual investment cost for a bin is not avaialble; use $1.00/bu. capacity--includes augers, floor, etc.

[3]Use price charts in Lesson 6; Outlook Information; and/or ASCS loan rates to determine this figure.

UNIT - MARKETING

Lesson 4 - How does grain grading affect the price?

EXAM

_____ 1. Irregardless of whether you sell at harvest, store or hedge, it is always to your advantage to obtain the best cash price when you deliver your grain. True or False

_____ 2. Unclean harvesting and storage equipment may affect the grade of your grain. True or False

_____ 3. Elevators generally will not have a discount price because they deal only with No. 1 grade. True or False

_____ 4. All grain is priced on the basis of Grade No. 1 (No. 1 soybeans, No. 1 corn, etc.). True or False

_____ 5. It always is profitable to dry grain to avoid moisture discounts. True or False

_____ 6. The typical moisture discount for grain is 1% for each .5% moisture above maximum. True or False

_____ 7. Correct setting of harvesting equipment is important to avoid discounts. True or False

_____ 8. Blending is the mixing of grain with different amounts of moisture, foreign material, etc., to avoid or reduce a discount. True or False

_____ 9. Drying soybeans to 10% moisture compared to 13% will increase the price per bushel. True or False

_____10. Corn, soybeans, wheat, and milo all need to be dried to 12% to avoid a moisture discount. True or False

UNIT - MARKETING

Lesson 4 - How does grain grading affect price?

ANSWERS TO EXAM

1. True
2. True
3. False
4. False
5. False
6. True
7. True
8. True
9. False
10. False

UNIT - MARKETING

Lesson 5 - How can I market grain with a protected price?

Objective: At the conclusion of the lesson, students will be able to determine an "asking" price for their grain.

Study Questions:

1. Why is grain marketing becoming more important?
2. What do you need to know to determine your "asking" price?
3. What factors are considered in forward pricing?
4. Who especially needs price protection? Why?
5. How do you determine a price objective?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doanes
3. Handout

   HO-13: Forward Pricing/Hedging Analysis

UNIT - MARKETING

Lesson 5 - How can I market grain with a protected price?

TEACHING PROCEDURE

A. Review grain grading with emphasis on cash price.

B. Motivation: Do any of you know the price you will receive for corn this fall? Would there be an advantage to this? How can I guarantee the price I will receive for grain?

C. Assignment

D. Supervised study

E. Discussion

1. Let students identify these reasons and use as need for more study of grain marketing (vs. selling).

   Why is grain marketing becoming more important?

   1) Less government regulations and subsidies
   2) More exports
   3) More credit being used
   4) More price fluctuations
   5) More risk

2. After students discuss need for market objective and price, distribute copies of HO-13 and determine production costs for crops common in the community. Use Manual 75 as reference to get "inputs" and use current costs. Let them determine an acceptable "asking price".

   What do you need to know to determine your "asking price"?

   1) Market objective
   2) Cost of production
   3) Desired (obtainable) price

3. Let students discuss the two main factors. Some, because of background, etc., will feel more strongly about risk vs. protection. They should be permitted to establish their objective. Refer to the Daily Market Summary and let them react to the acceptability of a forward price - as an example, next July corn futures (subtract local basis - a tentative basis can be determined by subtracting local cash bids from the nearby futures quote).

What factors are considered in forward pricing?

1) How much risk do you want to assume

2) Your pricing objective

   a. To get a higher price than ultimate cash
   b. To lock in an acceptable profit and avoid price declines
   c. To base management decision on known prices

4. Since some of the class will be young farmers in the next few years, ask if they will have a problem of needed income to make payments on debts, family expenses, and capital for expanding their business.

   Who especially needs price protection? Why?

   1) Young farmers just starting out

   2) Others to cover cost of production

5. Work an actual problem for a student with a grain crop as part of the SOEP or for one of the student's parent's crops. Determine the price objective based on the three steps studied in this question.

   How do you determine a price objective?

   1) Cost of production plus a profit

   2) Fundamentals

   3) Charts

F. Summary

G. Evaluation and/or exam - use additional quizzes as on HO-13, etc.

FORWARD PRICING/HEDGING ANALYSIS[1]

	Corn	Beans	Wheat	Milo
	---------Per Acre----------			
I. Production Costs[3]				
A. Variable Costs:				
1. Seed				
2. Fertilizer				
3. Lime (annual charge)				
4. Chemicals				
5. Hired Labor				
6. Machinery (fuel, oil, repair)				
7. Other (interest, etc.)				
8. Total Variable Costs (1 to 7)				
B. Fixed Costs:				
9. Machinery				
10. Land				
11. Operator Labor				
12. Misc. Overhead				
13. Total Fixed Costs (9 to 12)				
14. Total Costs (8 to 13)				
15. Cost Per Bu. (line 14 ÷ line 16)				
C. Returns				
16. Estimated Yield				
17. Estimated Price[2]				
18. Total Returns (line 16x17)				
19. Income over Variable Costs (line 18-8)				
20. Income over Total Costs (line 18-14)				

[1]Use to determine price at which to hedge or forward contract and/or decide which crop to grow.

[2]If hedging, use local price (futures minus basis) for the month you want to deliver.

[3]Use Manual 75 - Farm Planning Handbook to get estimates of quantities if not available from past farm records.

DIRECTIONS

This form can be used several ways:

1. Determine potential profit if price is hedged or forward contracted at the present opportunity.

2. Determine price at which to hedge or forward price in order to obtain your profit goal.

3. Determine amount of crop to hedge or forward contract to achieve a goal as "lock in enough profit to cover principal and interest payments," etc.

4. Determine profit potential from different crops to help decide acres for each crop.

UNIT - MARKETING

Lesson 5 - How can I market grain with a protected price?

EXAM

_____ 1. A farmer has to take whatever price the buyer wants to give for his or her grain. True or False

_____ 2. It is possible to "sell" grain before it is harvested. True or False

_____ 3. To do a good job of marketing, a grain producer must have a marketing objective. True or False

_____ 4. Forward pricing will enable you to get the top price each year. True or False

_____ 5. You should consider three steps in determining your price objective:

a._____ _____ _____

b._____ _____

c._____

_____ 6. Increasing U. S. dependence on foreign buyers complicates the grain marketing system. True or False

_____ 7. Some producers use cash contracts or futures contracts to cover only their direct costs of production and storage. True or False

_____ 8. Who especially needs price protection?

a._____ _____ _____

b._____ _____

_____ 9. One objective of forward pricing is to lock in an acceptable profit and avoid price declines. True or False

_____10. Forward pricing will enable a farmer to always receive the highest price in the marketing year for grain. True or False

UNIT - MARKETING

Lesson 5 - How can I market grain with a protected price?

ANSWERS TO EXAM

1. False
2. True
3. True
4. False
5. a) Cost of Production
   b) Fundamentals
   c) Charts
6. True
7. True
8. a) How much risk do you want to assume
   b) Others to cover cost of production
9. True
10. False

UNIT - MARKETING

Lesson 6 - What are some alternative grain marketing methods?

Objective: At the conclusion of the lesson, students will be able to select the best marketing method to fit their situation.

Study Questions:

1. What are alternative marketing methods - advantages and disadvantages of each - how does each work?
2. What are the provisions that should be included in a forward contract?
3. How much of the production might be forward contracted or hedged?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doanes
3. Transparencies
   a. TM-11: No. 1 Yellow Soybeans
   b. TM-12: No. 2 Yellow Corn
   c. TM-13: No. 2 Yellow Grain Sorghum
   d. TM-14: No. 2 Hard Winter Wheat
4. Handouts
   a. HO-14: Forward Contract Example
   b. HO-15: Feed Bank Agreement Example
   c. HO-16: Feed Bank and Cash - Corn
   d. HO-17: Feed Bank and Cash - Milo
   e. HO-18: 1 April 1978 to 30 September 1978

UNIT - MARKETING

Lesson 6 - What are some alternative grain marketing methods?

TEACHING PROCEDURE

A. Review forward pricing and price protection.

B. Motivation: How many students sell cash grain at harvest? Store grain for later sale? If you can't get the price you want, will you feed it to your livestock?

C. Assignment

D. Supervised study

E. Discussion

1. Make a large chart on the board with headings for the six methods of marketing. Let students mention advantages and disadvantages of each and list under the headings. They can also describe how each works and a brief summary placed under each heading. Next, use the Price Charts from the Farm Credit Intermediate Bank, Wichita, to determine price trends for the last three years and determine profit between cash markets and storage. Also, compare "averaging". Refer to HO-15 as sample "grain bank" contract to use for No. 5 below.

   What are alternative marketing methods?

   1) Sell cash grain at harvest
   2) Store grain at harvest for later sale
   3) Forward contracting
   4) Hedging with futures
   5) Feeding to livestock
   6) Selling for seed and other special markets

2. This should be fully discussed since many contracts are incomplete and provide opportunity for misunderstandings and problems. Refer to HO-14 as an example of forward contracts.

   What are the provisions that should be in a forward contract?

1) Parties
2) Date
3) Commodity
4) Quantity
5) How delivered
6) Specifications (grade, dockage)
7) Price
8) Terms of payment
9) Point and method of delivery
10) Time for final delivery

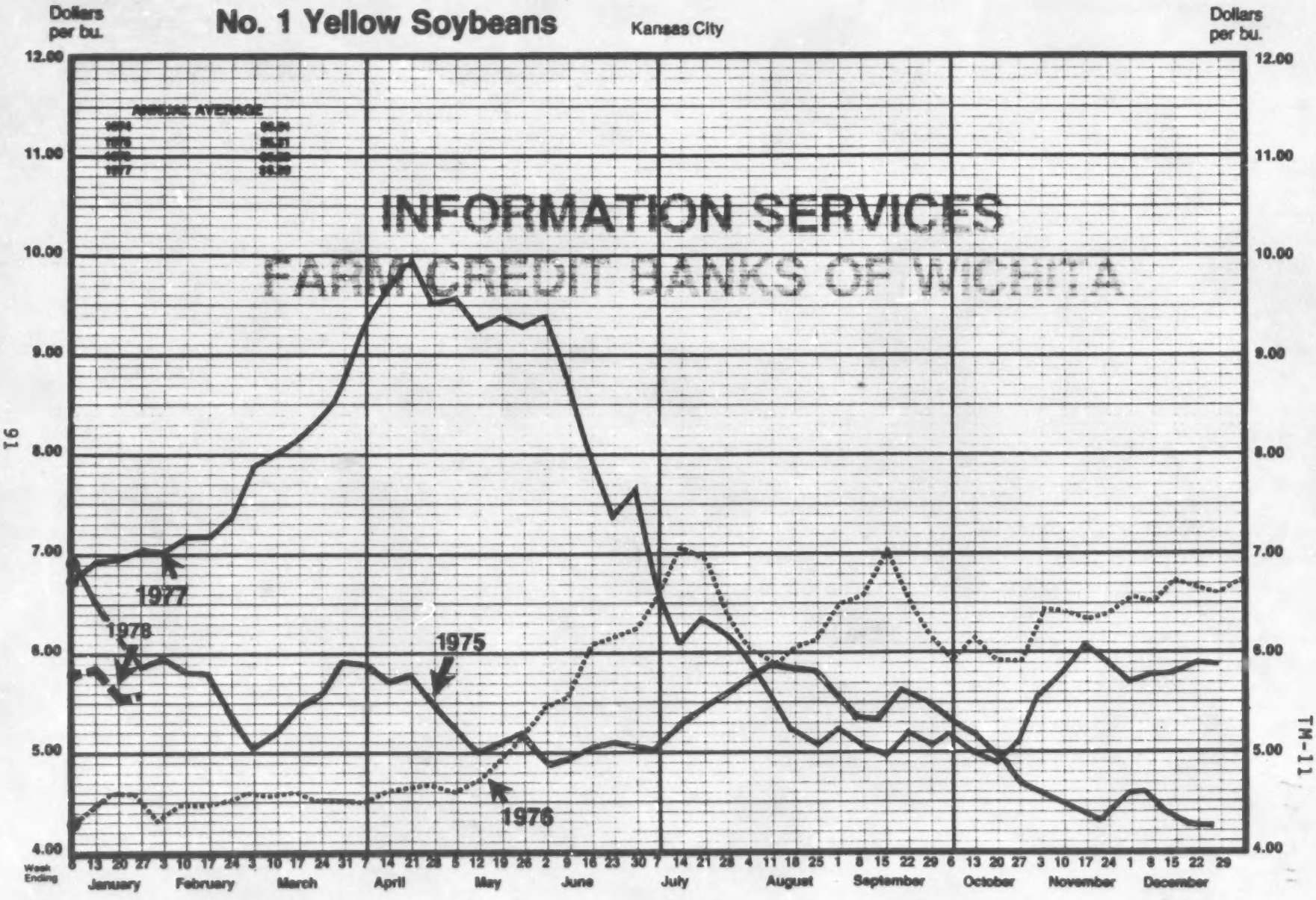
3. Let students point out reasons for not pricing the entire production and then set goals as 1/3 early, 1/3 mid-season, 1/3 unprotected.

How much of the production might be forward contracted or hedged?

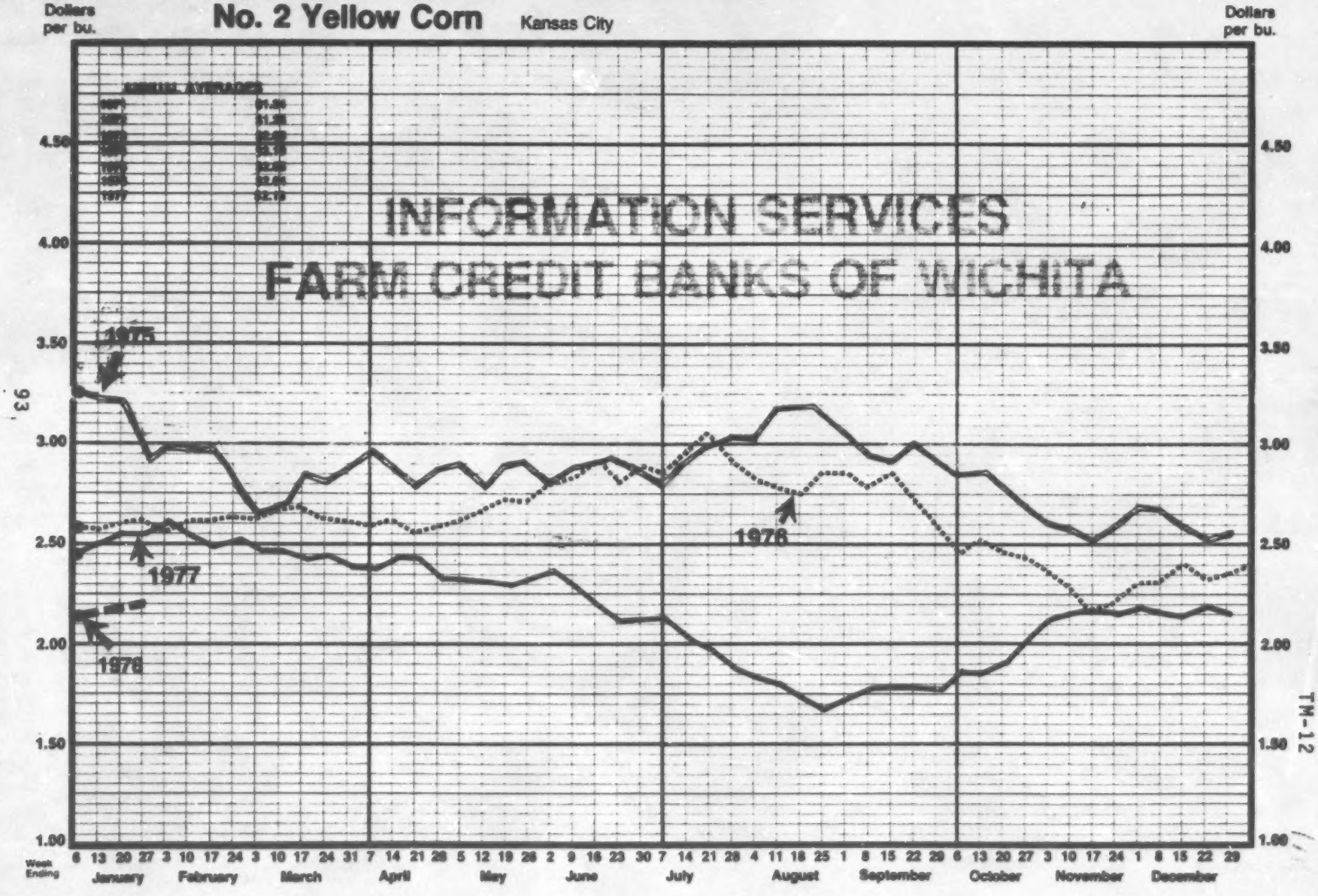
1) 1/3 early, 1/3 mid-season, 1/3 unprotected if this meets the farmer's objectives

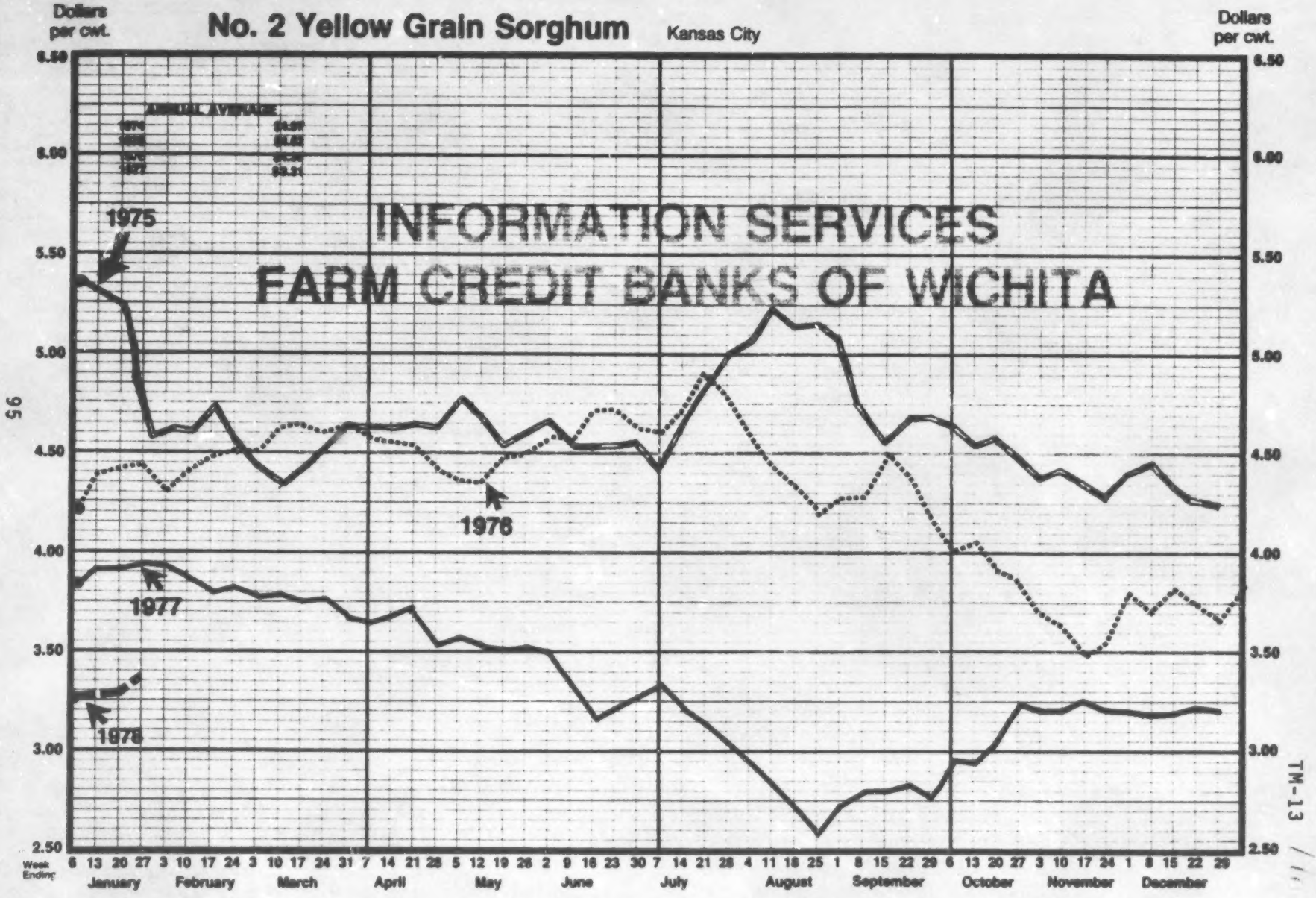
F. Summary

G. Evaluation and/or exam



INFORMATION SERVICES
FARM CREDIT BANKS OF WICHITA


No. 2 Yellow Corn
Kansas City
Dollars per bu.
Dollars per bu.
INFORMATION SERVICES
FARM CREDIT BANKS OF WICHITA
1975
1976
1977
1978
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
Week Ending
January
February
March
April
May
June
July
August
September
October
November
December
TW-12

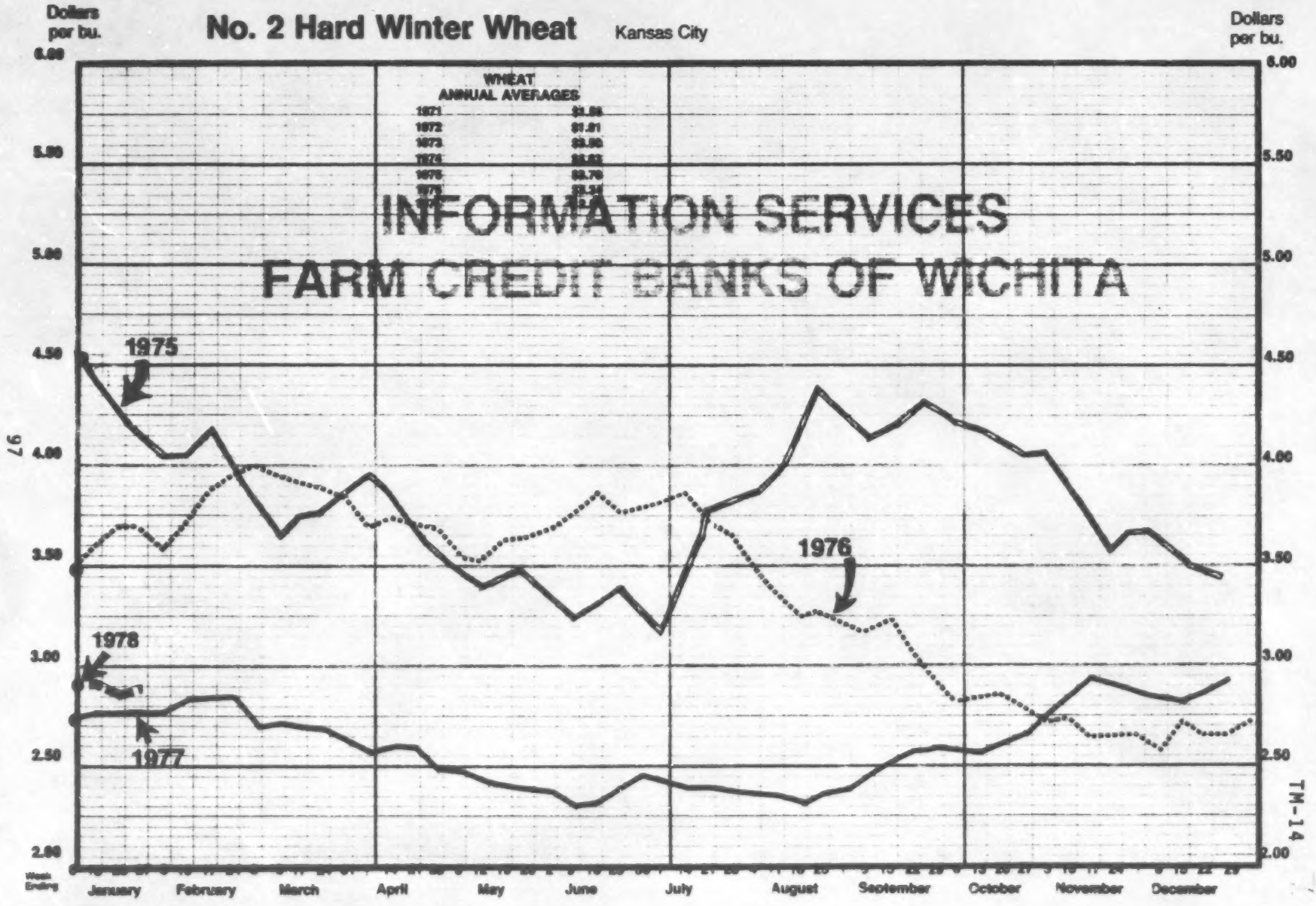

No. 2 Yellow Grain Sorghum
Kansas City
Dollars per cwt.
Dollars per cwt.
ANNUAL AVERAGE
1975
1976
1977
1978
INFORMATION SERVICES
FARM CREDIT BANKS OF WICHITA
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
Week Ending
6 13 20 27 3 10 17 24 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 7 14 21 28 4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29
January
February
March
April
May
June
July
August
September
October
November
December

95

TW-13

74

75


No. 2 Hard Winter Wheat
Kansas City
Dollars per bu.
Dollars per bu.
WHEAT
ANNUAL AVERAGES
INFORMATION SERVICES
FARM CREDIT BANKS OF WICHITA
1975
1976
1978
1977
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
January
February
March
April
May
June
July
August
September
October
November
December
97
TM-14

FORWARD CONTRACT EXAMPLE

_____ 19____

№ 6030

This is to certify that I, _____ *have this day contracted and sold to* _____ *bushels of* _____ *at* _____ *cents per bushel (* _____ *lbs. per bushel) to be clean, sound and dry and to grade No.* _____ *to be delivered into* _____ *elevator or cribs at* _____ *on or before the* _____ *day of* _____ *19____.*

If damaged or inferior grain is delivered and accepted on this contract, the market difference at which such grain is selling under the contracted grade day of delivery shall be deducted from the contract price. Any extension of time to be at buyer's option. Any balance or overrun will be accepted only at the market price on day of delivery. Should elevator be full or incapacitated in any way, when grain is tendered, grain shall be delivered as soon thereafter as elevator can receive same.

I certify that this grain is in my possession and free of all liens and incumbrances.

_____

Received of _____

_____ *DOLLARS*

to apply on this contract.

_____

99

HO-14

FEED BANK AGREEMENT EXAMPLE

1 October 1977 to 27 September 1978

The "FEED BANK" provides a means for individual feeders to have the benefits of an up to date grain handling and feed mixing facility without the large investment required for installation of these facilities on the farm.

_____ is a licensed and bonded Warehouse by the State of Missouri and is required to follow State and Federal regulations on FEED BANK service. Periodic examinations are made by these two agencies to insure that your grain is in our warehouse and in good condition.

Basically the FEED BANK operates as follows:

A. Feed grain is delivered to _____ anytime convenient to the Farmer which generally is at harvest time and placed on "DEPOSIT" for future use in the making of <u>complete feeds</u>.

B. When feed is needed "WITHDRAWALS" are made from the grain "DEPOSITED". The grain is processed, (grind or crimped), mixed with a _____ concentrate and delivered to the farm.

This is the way that the feed bank has been designed to be used and when used as described in A & B above the following terms, conditions and charges are set forth to govern the FEED BANK agreement between _____ and its Patrons.

1. DEPOSITS: Provided storage room is available at the elevator, user may deliver their own grain or purchase grain from other sources and put it on DEPOSIT to the <u>users feed bank account</u> at _____.

2. Only yellow shelled corn, feed grain milo (yellow or red seed coat), or oats meeting the grades and moisture listed on the attached grading sheet; (Schedule of Grades and Moisture accepted for Feed Bank) may be deposited.

3. Charges are made as follows:

   a. "<u>IN CHARGE</u>": 10¢ cwt wet basis made at time of deposit to cover cost of handling the grain, shrinkage, insect control, aeriation, insurance, and all other costs (except storage) while the grain is on deposit. All the grain remaining in the feed bank is your property and you are liable for assessments and taxes.

b. Weight losses and drying charges for all feed bank grain deposited are computed on each load as received. Drying costs are due and payable by the user. Your account will be charged with these drying costs and _____ credit will apply.

c. WITHDRAWALS: As feed is needed grain is withdrawn from the Feed Bank, processed and mixed with the proper amount of _____ supplement to make it a complete feed. It is subject to the following charges.

1. Processing: (grind or crimp and mixed) with correct amount of _____ supplement. A charge of 30¢ cwt is made on the total mix.

2. Delivery: No Charge if user orders complete feed in quantities of 3 tons or more for delivery under 30 miles or 6 tons or more for delivery over 30 miles and this complete feed is delivered to one or more feeders at one location. For orders placed for delivery to more than one place or for less than the above minimum tonnage and mileage, a delivery charge will be made as follows:

a. Less than 3 tons complete feed delivered under 30 miles or to more than one location. $10.00.

b. Less than 6 tons complete feed delivered over 30 miles or to more than one location. $20.00.

3. Bagging: A charge of 20¢ cwt, plus prevailing cost of bags, (paper or burlap), will be made to cover cost of bagging. (You must still have a minimum of 3 or 6 tons ordered to one place at one time to receive free delivery).

4. Storage: No charge will be made on feed bank grain provided a minimum of 3 ton complete feed is used at least once monthly. When no feed bank grain has been used in 3 ton or more of complete feed during any given month. (Month is defined as _____ month, not the calendar month), then a storage charge of 5.0¢ cwt will be made on total amount of all feed grain deposited in the feed bank, per month.

4. OTHER:

A. No provision has been made to carry feed bank grain over from one year to the next. (All grain in feed

bank needs to be used up, sold or withdrawn by the inventory date of September each year.) Grain carried over will have assessed a storage charge of 5.0¢ per cwt per month from the date grain was deposited in Feed Bank.

B. No overdrafts can be allowed: If user doesn't have enough grain on DEPOSIT in feed bank to cover feed ordered, the amount of overdraft will be charged out at that days current retail prices. (It is the responsibility of each individual to keep track of the balance of grain on deposit in the feed bank and avoid overdraft.) _____ will mail you a monthly statement of your feed bank account.

C. User can pick up his/her complete feed, if he/she desires, as long as he/she orders a minimum of 1000 lbs. or more. All charges previously stated will apply.

If for any reason grain is used out of the feed bank in any other manner than processed by _____ and mixed with the right amount of _____ supplement to make a complete feed of said grain, the the following charges will apply.

1. STORAGE: 5.0¢ cwt for each month grain has been stored on all grain so removed. (Such grain so removed does not apply as part 3 ton used to waive storage charges for that month on balance of feed bank grain.)

2. Out Charge of 5.0¢ cwt for such grain removed.

3. Delivery charge of 20¢ cwt. (minimum of $10.00 for less than 30 miles and $20.00 for more than 30 miles) for this grain removed.

Excess grain that user will not be able to use up as feed may be sold out of the FEED BANK to anyone or _____ at current market prices. The above stated charges will apply to grain sold to anyone but _____. If the grain is sold to _____ only the monthly storage charge will apply. (5.0¢ cwt for each month in the feed bank.)

This agreement is to be renewed with any changes before September 27, 1978.

I agree to the terms and conditions of this agreement and I plan to place the following kinds and amounts of grain on DEPOSIT in the feed bank.

CORN_____

MILO_____ SIGNED:_____

OATS_____ DATE:_____

FEED BANK AND CASH

CORN 1977

DRYING COST AND SHRINKAGE TABLE FOR MOISTURE IN EXCESS OF 15.5%

Drying Weight Loss % Deducted from Net Weight	From Moisture of	to	Drying Cost per Bushel
.6%	15.50	15.99	4.0¢
1.3%	16.00	16.49	5.0¢
2.0%	16.50	16.99	6.0¢
2.7%	17.00	17.49	7.0¢
3.4%	17.50	17.99	8.0¢
4.1%	18.00	18.49	9.0¢
4.8%	18.50	18.99	10.0¢
5.5%	19.00	19.49	11.0¢
6.2%	19.50	19.99	12.0¢
6.9%	20.00	20.49	13.0¢
7.6%	20.50	20.99	14.0¢
8.3%	21.00	21.49	15.0¢
9.0%	21.50	21.99	16.0¢
9.7%	22.00	22.49	17.0¢
10.4%	22.50	22.99	18.0¢
11.1%	23.00	23.49	19.0¢
11.8%	23.50	23.99	20.0¢
12.5%	24.00	24.49	21.0¢
13.2%	24.50	24.99	22.0¢
13.9%	25.00	25.49	23.0¢
14.6%	25.50	25.99	24.0¢
15.3%	26.00	26.49	25.0¢
16.0%	26.50	26.99	26.0¢
16.7%	27.00	27.49	27.0¢
17.4%	27.50	27.99	28.0¢
18.1%	28.00	28.49	29.0¢
18.8%	28.50	28.99	30.0¢
19.5%	29.00	29.49	31.0¢
20.2%	29.50	30.00	32.0¢

26.0% moisture and over not acceptable in Feed Bank

FEED BANK AND CASH

MILO 1977 -

DRYING COST & SHRINKAGE TABLE FOR MOISTURE IN EXCESS OF 13.0%

Drying Weight Loss % Deducted from Net Weight	From Moisture of	to	Drying Cost Per CWT
.7	13.00	13.49	7.0¢
1.4%	13.50	13.99	8.8¢
2.1%	14.00	14.49	10.6¢
2.8%	14.50	14.99	11.4¢
3.5%	15.00	15.49	13.2¢
4.2%	15.50	15.99	15.0¢
4.9%	16.00	16.49	16.8¢
5.6%	16.50	16.99	18.6¢
6.3%	17.00	17.49	20.4¢
7.0%	17.50	17.99	22.2¢
7.7%	18.00	18.49	24.0¢
8.4%	18.50	18.99	25.8¢
9.1%	19.00	19.49	27.6¢
9.8%	19.50	19.99	29.4¢
10.5%	20.00	20.49	31.2¢
11.2%	20.50	20.99	33.0¢
11.9%	21.00	21.49	34.8¢
12.6%	21.50	21.99	36.6¢
13.3%	22.00	22.49	38.4¢
14.0%	22.50	22.99	40.2¢
14.7%	23.00	23.49	42.0¢
15.4%	23.50	23.99	43.8¢
16.1%	24.00	24.49	45.6¢
16.8%	24.50	24.99	47.4¢
17.5%	25.00	25.49	49.2¢
18.2%	25.50	25.99	51.0¢
18.9%	26.00	26.49	52.8¢
19.6%	26.50	26.99	54.6¢

18.0% Moisture and over not acceptable for Feed Bank

1 April 1978 to 30 September 1978

All corn in Feed Bank must be shrunk from 15.5% moisture to 13.5% moisture on the 1st day of April 1978. Any corn that is to be deposited in Feed Bank after the 31st of March 1978 must be at least 13.5% moisture, or less.

Drying Weight Loss % Deducted from Net Weight	From Moisture of	to	Dry to	Drying Cost per Bushel
.6%	13.50	13.99%	13.50%	1.0¢
1.3%	14.00	14.49%	13.50%	2.0¢
2.0%	14.50	14.99%	13.50%	3.0¢
2.7%	15.00	15.49%	13.50%	4.0¢

UNIT - MARKETING

Lesson 6 - What are some alternative grain marketing methods?

EXAM

_____ 1. Grain prices are always lowest at harvest. True or False

_____ 2. As we studied it, a farmer has six marketing alternatives for grain. List four of these:

a._____

b._____

c._____

d._____

_____ 3. Three methods of forward contracting are:

a._____

b._____

c._____

_____ 4. Cash contracts have some particular advantages. List four of the six which were studied in this lesson.

a._____

b._____

c._____

d._____

_____ 5. List the three disadvantages of cash contracts studied in this lesson.

a._____

b._____

c._____

UNIT - MARKETING

Lesson 6 - What are some alternative grain marketing methods?

ANSWERS TO EXAM

1. False

2. a. Sell cash at harvest
   b. Store at harvest for later sale
   c. Forward contract
   d. Hedging with futures market

3. a. Fixed price agreement
   b. Deferred price agreement
   c. Pooled sales contract

4. a. Eliminates some market risk and uncertainty
   b. Grower can contract quantities smaller than 5,000 bushels
   c. No margin or commission required
   d. Grower can get credit easier
   e. Grower can make better management decisions
   f. Need for storage facilities eliminated

5. a. Grower has less market flexibility
   b. Grower must deliver at contract price at time of delivery
   c. Risk of default by grain dealer or professor

UNIT - MARKETING

Lesson 7 - How can futures markets aid in the marketing of grain?

Objective: At the conclusion of the lesson, students will be able to effectively use futures when marketing grain.

Study Questions:

1. What is hedging?
2. What is basis? Why is it important?
3. Explain how a futures transaction works.
4. How can futures be used to lock in storage income?
5. What is an inverted basis? How do you use it?

References:

1. Student Reference in Agriculture Marketing
2. Profit Marketing - Doanes
3. Transparencies
   a. TM-15: Should I Forward Price
   b. TM-16: Grain Marketing
4. Handouts
   a. HO-19: Sample Broker
   b. HO-20: Assignment Sheet #1
   c. HO-21: Assignment Sheet #2

UNIT - MARKETING

Lesson 7 - How can futures markets aid in the marketing of grain?

TEACHING PROCEDURE

A. Review protected price and marketing alternatives. Discuss how they relate to each other.

B. Motivation: When you harvested your corn and were ready to sell for cash, your neighbor said that corn would be worth more in the future. In fact, your profit would be greater if you stored your corn and sold at a later date. Would you sell now for cash or store for the future?

C. Assignment

D. Supervised study

E. Discussion

1. The point often becomes confusing to students - use examples that clarify it. If possible, have a local farmer or elevator operator visit the class and tell how he hedges. If a commodity broker is available, he might visit the class and discuss how a customer works with his broker.

   What is hedging?

   1) Using the futures market to forward price your grain crop.

2. Students need to understand basis before they can use hedging. After they have discussed it, determine the local basis for the nearby month by contacting a local elevator. Students should keep a basis chart - charts could be kept by groups for several grains and for different months - recording once per week - post the charts where all can see including your adult farmers. (Point out that basis in grain and livestock are entirely different since grain is produced one time per year and livestock continuously.

   What is basis? Why is it important?

   1) Basis is the difference between the futures price and your local cash price.
   2) Basis determines your profit in a futures hedge.

3. Let students explain the mechanics of the transaction. The discussion should be from the standpoint of how they would proceed if they decided to hedge including the procedures when they sell the grain and buy back the futures contract.

Explain how a futures transaction works.

1) Set price objective and know basis
2) Contact broker
3) Make arrangements for margin money
4) Use examples of balance sheet as in Student Reference

4. Since this method of locking in a profit has been profitable in more recent years and since many young farmers have on-farm or commercial storage available, the students should understand this method completely.

How can futures be used to lock in storage income?

1) Store cash grain at harvest
2) Sell futures in distant month with narrower basis than present
3) Profit will be change in basis

5. Have students give examples of an inverted basis - locally, if possible. There are two kinds of inverted basis: (1) cash higher than futures and (2) nearby futures higher than distant futures. In neither case is it possible to lock in a storage profit. Use the Daily Market Summary to identify some examples if possible (this usually occurs with a crop that is in short supply or location differences).

What is inverted basis? How to use?

1) Cash higher than futures
2) Nearby higher than distants
3) For risk averters, sell cash
4) For speculators; store cash unhedged

Other Activities:

1. Have a broker meet with the class and discuss the mechanics of hedging. Frequently, they confuse students so it is well to plan the broker's presentation. How to work with a broker should be the goal of this session.

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2. Invite a local farmer and/or elevator operator that uses price protection to discuss how they operate. The elevator operator could discuss forward contracts that he or she has available and how he or she protects his or her price.

3. A banker or PCA fieldperson could discuss the value of price protection and management techniques from the creditor's viewpoint.

4. Other activities could include a field trip to the Kansas City Board of Trade and/or to a local broker's office.

5. Complete one or more of the assignments on the hand-outs.

F. Summary

G. Evaluation and/or exam - use additional quizzes as Assignment Sheet #1 or #2.

SHOULD I FORWARD PRICE

1. HOW MUCH RISK DO I WANT TO ASSUME?

   A. FINANCIALLY SECURE

   B. YOUNG FARMER-NEED MINIMUM INCOME

2. WHAT IS MY PRICE OBJECTIVE?

   A. COST OF PRODUCTION

   B. FUNDAMENTALS

   C. CHARTS

GRAIN MARKETING

1. SELL CASH AT HARVEST
2. STORE CASH AT HARVEST
   - A. SELL AT HIGHER PRICE
   - B. USE AVERAGING
3. FORWARD CONTRACTING
   - A. FIXED PRICE CONTRACT
   - B. DEFERRED PRICE CONTRACT
   - C. POOLED SALES CONTRACT
4. HEDGING WITH FUTURES MARKET
   - A. HEDGE DURING GROWING SEASON
   - B. SELL CASH AT HARVEST-BUY DISTANT CONTRACT
   - C. PROTECT STORAGE PROFIT-HEDGE THE BASIS

SPECULATIVE MARGINS

	NET POSITIONS				STRADDLES & SPREADS			
CHICAGO MERC. EX.	ORIG. MARGIN	IN DEL. MONTH	MAIN-TENANCE	IN DEL. MONTH	ORIG. MARGIN	IN DEL. MONTH	MAIN-TENANCE	IN DEL. MONTH
Pork Bellies	$1200	$2000	$900	$1500	$ 700	$1200	$ 400	$ 900
Cattle Live	1200	1500	900	1200	600	1500	400	1000
Hogs	1000	1200	700	900	500	1200	300	900
Eggs	1000	1200	700	900	600	1200	500	900
Potatoes (Idaho)	500	1500	350	1000	300	1500	200	1000
2 X 4 Lumber	1200	1200	900	900	600	1200	400	900
Feeder Cattle	1500	2000	1200	1500	600	2000	400	1500
BOARD OF TRADE								
Soybeans	$4000	3000	$3000	2000	$ 500	3000	$ 300	$2000
Soybean Meal	1400	3000	900	2000	400	3000	300	2000
Soybean Oil	1500	3000	1200	2000	400	3000	300	2000
Corn	700	2000	500	1500	300	2000	200	1500
Wheat (Also K.C. & Minn.)	1500	2000	1000	1500	400	2000	300	1500
Oats	600	2000	400	1500	300	2000	200	1500
Silver	2500	3000	1800	2000	300	3000	200	2000
Broilers	1000	2000	700	1500	400	2000	300	1500
Plywood	1000	2000	700	1500	400	2000	200	1500
Gold	1500	3000	1000	2000	600	3000	400	2000
GNMA	1500	2000	1000	1500	600	2000	600	1500
Treasury Bonds	1500	2000	1250	1500	600	2000	600	1500
Commercial Paper	1250	2000	1000	1500	600	2000	600	1500
INT. MONETARY MKT.								
British Pound	$1500		$1000					
Deutschemark	2500		2000					
French Franc	2000		1500					
Swiss Franc	3000		2200		Spread margins vary as to spot and futures; also intra-market spreads.			
Japanese Yen	2000		1500					
Canadian Dollar	2000		1500					
Mexican Peso	4000	10000	3000	8000	2000	12000	1500	8000
Dutch Guilder	2000		1500					
Silver Coins (U.S. & Can.)	1200		900		300		200	
Copper-Chicago	500		350		400		300	
Gold	1000		700		200		200	
T-Bills	1000		800		400		300	
NEW YORK								
Boneless Beef	$1500	$1700	$1200	$1300	$ 800	$1700	$ 500	$1300
Silver Coins (NYME)	2000		1500		1000		700	
Silver (Comex)	2500	3000	2000	2000	300	3000	200	2000
Sugar	1500		1000		500		300	
Potatoes (Maine)	500	2000	350	1500	300		200	
Cocoa	5000	12000	4000	10000	1800	12000	1300	10000
Coffee	8000		5000		3000		2000	
Copper	1500		1250		300		200	
Cotton	2000		1500		750		500	
Orange Juice	3000		2250		800		600	
Platinum	2000		1500		500		400	
Gold (Comex)	1500	3000	1250	2000	600	3000	400	2000
MID AMERICA EXCHANGE								
Soybeans	$800		$ 600		$ 200		$ 100	
Wheat	400		200		150		100	
Corn	200		100		100		50	
Silver	400		280		100		50	
Hogs	600		400		200		150	
Gold	400		300		100		100	
Cattle	700		500					

These margins are in effect as of June 20,1979 Margins are subject to change and/or revision at any time without prior notice. Certain commodities are subject to floating margins based on price levels. Please consult us for the most current rate.

Member Principal Commodity Exchanges

CONTRACT INFORMATION AS OF JUNE 20, 1979

COMMODITY	EXCHANGE	TRADING HRS. CHGO., TIME	CONTRACT	VALUE OF 1¢ MOVE	ROUND-TURN COMMISSION OFF	DAY	SPREADS
Bean Crush	C.B.T.	9:30 - 1:15			$120		
Br. Pound	I.M.M.	8:15 - 1:24	25,000 pounds	$12.50/tick	55	35	60
Broiler	C.B.T.	9:15 - 1:20	30,000 pounds	$300	45	30	50
Can. Dollar	I.M.M.	8:15 - 1:22	100,000 Can. Dol.	$10/tick	55	35	60
Cattle	C.M.E.	9:05 - 12:45	40,000 pounds	$400	50	30	55
Cocoa	N.Y. Cocoa	8:30 - 1:30	30,000 pounds	$300	75	45	85
Coffee	N.Y. Coffee & Sug.	8:45 - 1:30	37,500 pounds	$375	100	60	110
Commercial Paper	C.B.T.	8:30 - 1:35	1,000,000 dollars	$25/pt.	75	45	90
Copper - Chgo.	I.M.M	8:45 - 1:15	12,500 pounds	$125	35	22	40
Copper	Com. Ex. Inc.	8:50 - 1:00	25,000 pounds	$250	60	40	70
Corn	C.B.T.	9:30 - 1:15	5,000 bushels	$50	45	28	50
Cotton	N.Y. Cotton	9:30 - 2:00	50,000 pounds	$500	75	45	88
Deutschmark	I.M.M.	8:15 - 1:20	125,000 Mks.	$12.50/tick	55	35	60
Eggs	C.M.E.	9:20 - 1:00	22,500 dozen	$225	45	28	50
Feeder Cattle	C.M.E.	9:05 - 12:45	42,000 pounds	$420	50	30	55
French Franc	I.M.M.	8:15 - 1:28	250,000 Francs	$12.50/tick	55	35	60
GNMA	C.B.T.	8:30 - 2:45	100,000 dollars	$31.25/tick	75	45	90
Gold	I.M.M.	8:25 - 1:30	100 Tr. ozs.	$100	50	30	55
Gold	Com. Ex. Inc.	8:25 - 1:30	100 Tr. ozs.	$100	50	30	60
Hogs	C.M.E.	9:15 - 12:55	30,000 pounds	$300	45	28	50
Japanese Yen	I.M.M.	8:15 - 1:26	12,500,000 Yen	$12.50/tick	55	35	60
Lumber	C.M.E.	9:00 - 1:05	100,000 Bd. Ft.	$1.00/pt.	50	30	55
Mexican Peso	I.M.M.	8:15 - 1:18	1,000,000 Peso	$10/tick	55	35	60
Milo	C.M.E.	9:30 - 1:15	400,000 pounds	$400	50	30	55
Oats	C.B.T.	9:30 - 1:15	5,000 bushels	$50	40	26	45
Orange Juice	N.Y. Cotton	9:15 - 1:45	15,000 pounds	$150	60	40	70
Platinum	N.Y. Merc.	8:30 - 1:30	50 Tr. ozs.	$50/100 pts.	60	40	70
Plywood	C.B.T.	9:00 - 1:00	76,032 Sq. Ft.	$76	50	30	55
Pork Bellies	C.M.E.	9:10 - 1:00	38,000 pounds	$380	55	35	60
Pots - Russet	C.M.E.	9:00 - 1:00	80,000 pounds	$800	45	30	50
Pots - Maine	N.Y.Merc.	9:00 - 1:00	55,000 pounds	$550	40	25	80
Silver	C.B.T.	8:40 - 1:25	5,000 Tr. oz	$50	45	28	50
Silver Coins	N.Y.Merc.	8:35 - 1:15	$10,000 (Face Value)	$10/pt.	45	28	50
Silver Coins - Chgo	I.M.M.	8:50 - 1:25	$5,000 (Face Value)	10/tick	40	25	50
Silver - N.Y.	Com. Ex. Inc.	8:40 - 1:15	5,000 Tr. oz.	$50	45	28	50
Soybeans	C.B.T.	9:30 - 1:15	5,000 bushels	$50	55	35	60
Soybean Meal	C.B.T.	9:30 - 1:15	100 Sht. Ton	$100	45	30	55
Soybean Oil	C.B.T.	9:30 - 1:15	60,000 pounds	$600	45	30	55
Swiss Franc	I.M.M.	8:15 - 1:16	125,000 Franc	$12.50/tick	55	35	60
Sugar # 11	N.Y. Cof.& Sug.	9:00 - 1:43	112,000 pounds or 50 long tons	$1120	75	45	85
Treasury Bills	I.M.M.	8:10 - 1:40	1,000,000 dollars	$25/tick	65	42	75
Treasury Bonds	C.B.T.	8:30 - 2:45	100,000 dollars	$31.25/pt.	75	45	90
Wheat - Chgo.	C.B.T.	9:30 - 1:15	5,000 bushels	$50	45	28	50
	MID-AM		ALL CONTRACTS		25	18	30

The information contained herein is gathered from sources considered reliable. However,it is subject to change without prior notice.

*Commission fluctuates according to price range of traded commodity.

Exchange fees of 50¢ not included in the C.B.T. commission charges.

ASSIGNMENT #1 (Use in fall)*

A. Sample Hedging Problem (Growing Crop):

1. Assume you have 150 acres wheat growing that you expect to yield 40 bu./acre.

2. You may hedge or not hedge. You also have options of hedging a 5,000 bu. contract on the Board of Trade or 1,000 bu. contracts on the Mid-America Exchange; you may hedge 1,000 bu. in October, another in December, etc. If you hedge over 6,000 bu., you are speculating. If you hedge none, you are probably speculating.

3. Buy back contracts prior to the time school is out - May contract might be applicable (some teachers may want to let assignment last until July to be more practical).

4. Buy back contracts the day you sell wheat.

5. Use attached form for information, etc.

B. Maintain a chart of July wheat and local cash wheat.

*Note to teacher: This assignment might be more applicable if made in spring using corn, beans, milo, or cotton and headed toward November.

PROFIT (LOSS) ANALYSIS - ASSIGNMENT #1

Cash		Futures[2]	
Receipts:		Sale:	
6000 bu. wheat @_____[1]	$_____	_____ contract @ $_____	= $_____
		_____ contract @ $_____	= $_____
Expenses:		_____ contract @ $_____	= $_____
		_____ contract @ $_____	= $_____
Line 14 on HO-9 x 40 acres	$_____	Total Sales	= $_____
Profit (Loss)	$_____		
		Bought:[3]	
		_____ contract @ $_____	= $_____
		Commission	= $_____
		Interest on Margin	= $_____
		Total Costs	= $_____
		Profit (Loss)	= $_____

Total Profit (Loss) $_____

[1]Use Daily Market Summary prices for your area.

[2]Use closing prices as reported in Daily Market Summary.

[3]Buy all contract on date you sell cash wheat.

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ASSIGNMENT #2

A. Sample Hedging Problem (Storage Profit):

1. Assume you have 2,000 bu. soybeans in storage on your farm.

2. You have the facilities, finances, etc., to store until next May (want to empty the bins then for wheat, fescue, etc.).

3. You have some options:

   a. Store and sell for cash anytime between now and May (none hedged) (price averaging method).

   b. Store and hedge all or part.

   c. Sell on present cash market and deliver.

   d. May use Board of Trade (5,000 bu.) or Mid-America (1,000 bu.).

4. If hedged, buy back contracts the day you sell cash beans.

B. Keep a weekly chart of soybean prices for <u>both</u> cash beans and May beans.

PROFIT (LOSS) ANALYSIS - ASSIGNMENT #2

Cash	Futures[3]
Receipts:	Sale:
_____ bu.[1] @$____ = $_____	_____ contracts @ $_____ = $_____
	_____ contracts @ $_____ = $_____
Expenses:	_____ contracts @ $_____ = $_____
Storage Costs[2] = $100.00	
	Bought:
Profit over Storage = $_____	_____ contract @ $_____ = $_____
	Commission Hedged = $_____
	Interest on Margin = $_____
	Total Costs = $_____
	Profit (Loss) = $_____

Total Receipts = $_____ (over storage)

[1]Figure 2,000 bu. if sold immediately; figure 1,980 (1% shrink) if stored.

[2]Since you own the bins and have beans in them, costs are about the same from this point whether or not you store.

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UNIT - MARKETING

Lesson 7 - How can futures markets aid in the marketing of grain?

EXAM

_____ 1. A futures market is a market in which prices are established for commodities that will be delivered at some time in the future. True or False

_____ 2. The primary function of the futures market is to establish expected prices of commodities for several delivery months in advance. True or False

_____ 3. Hedging is a method of forward pricing that reduces risk. True or False

_____ 4. The difference between the Chicago futures market price for grain and your local cash price at the time you complete a hedge is called:

a. forward price
b. basis
c. hedging expense
d. none of the above

_____ 5. The basis normally reflects the cost of transportation and storage. True or False

_____ 6. A hedger that sold a 5,000 bu. contract of corn for November would do which of the following if the November contract advanced 20¢/bu.

a. hedger send the broker $1,000 more margin money
b. broker send the $1,000 to the hedger
c. do neither a or b
d. do both a and b

_____ 7. A hedger deposited $3,000 margin money with a broker. Which of the following is true.

a. The "cost" of margin is the interest on the margin.
b. Margin money is returned when the contract is canceled plus or minus profit on the contract.
c. The amount of margin money required can be increased.
d. all of the above
e. none of the above

____ 8. A farmer hedges 5,000 bu. soybeans with a price objective of $7.00 per bushel. The balance sheet appeared as follows:

Cash Market		Futures Market
Raise 5,000 bu. price objective	$7.00	Sold 5,000 bu. @ $7.35
	at harvest	
Sell 5,000 bu. locally @ $6.80		Buy 5,000 bu. @ $7.25

The net price, not considering commission and interest on margin money, was:

a. $7.10
b. $7.00
c. $6.90
d. $6.80
e. none of the above

____ 9. In Question 8, the basis:

a. widened 10¢ per bu.
b. narrowed 10¢ per bu.
c. stayed the same
d. narrowed 35¢ per bu.
e. widened 45¢ per bu.

____10. When harvest is over, a farmer has 10,000 bu. of corn in storage at a local elevator. The farmer can sell now for $2.30 per bushel on today's market and the nearby futures market quote is $2.75. Next July's futures market quote is $2.96 when the normal basis is 30¢ per bushel. If she or he stores the corn and hedges July futures, she or he will "lock in" storage income of:

a. 66¢/bu.
b. 45¢/bu.
c. 21¢/bu.
d. 36¢/bu.
e. none of the above

_____11. If the Chicago futures price for November beans is $7.30, and the local elevator is forward contracting for delivery in November at $6.70, the basis for November at this elevator is $_____.

_____12. Basis is normally widest at (harvest, 3 months following harvest, 6 months following harvest). Circle one.

_____13. Basis varies from one date to another and from one market to another. True or False

_____14. Basis is the key to successful hedging. True or False

_____15. Using basis correctly following harvest will enable you to lock in a _____ profit.

a. production
b. storage
c. speculative
d. none of the above

_____16. When cash prices are higher than futures prices, it is called a (an) _____ market.

a. normal
b. speculative
c. inverted
d. storage

_____17. You can predict basis more accurately than you can predict actual cash prices. True or False

UNIT - MARKETING

Lesson 7 - How can futures markets aid in the marketing of grain?

ANSWERS TO EXAM

1. True
2. True
3. True
4. b
5. True
6. a
7. d
8. c
9. a
10. d
11. 60¢
12. Harvest
13. True
14. True
15. b
16. c
17. True

UNIT - MARKETING

Lesson 8 - What is the significance of marketing trends in livestock?

Objective: At the conclusion of this lesson, students will be able to select profitable livestock markets.

Study Questions:

1. What have been the trends in the marketing of livestock? What are the causes of these trends?

2. What livestock markets are available to you?

References:

1. Student Reference in Agricultural Marketing

2. Profit Marketing - Doane's

3. UMC Guides 200, 201, 202, and 203

4. Price Charts from Farm Credit Bank, Wichita

5. Transparencies

   a. TM-17: The Meat Industry Before 1860

   b. TM-18: Trends in the Meat Industry

   c. TM-19: The Meat Supply

UNIT - MARKETING

Lesson 8 - What is the significance of marketing trends in livestock?

TEACHING PROCEDURE

A. Review

B. Motivation: Where did you sell hogs? cattle? What price did you receive?

C. Assignment

D. Supervised study

E. Discussion

1. Let students review the trends in livestock marketing that have occurred. They should understand that "costs" have determined the system used at any one time. Use TM-17 as discussion progresses.

What have been the trends in the marketing of livestock? What are the causes of these trends?

1) Livestock produced for family and local use
2) Railroads permitted shipment of livestock to eastern population centers for slaughter
3) Refrigerated railcars permitted packing plants to locate in livestock centers and ship meat to population centers
4) Packing plants moved to concentrated livestock areas (left out-of-date plants, high cost land, high cost labor) and started buying direct

2. Have students identify specific markets from the maps in the handouts for the livestock they raise. Let them use the Daily Market Summary to obtain prices at the various markets and decide which they will use for different livestock.

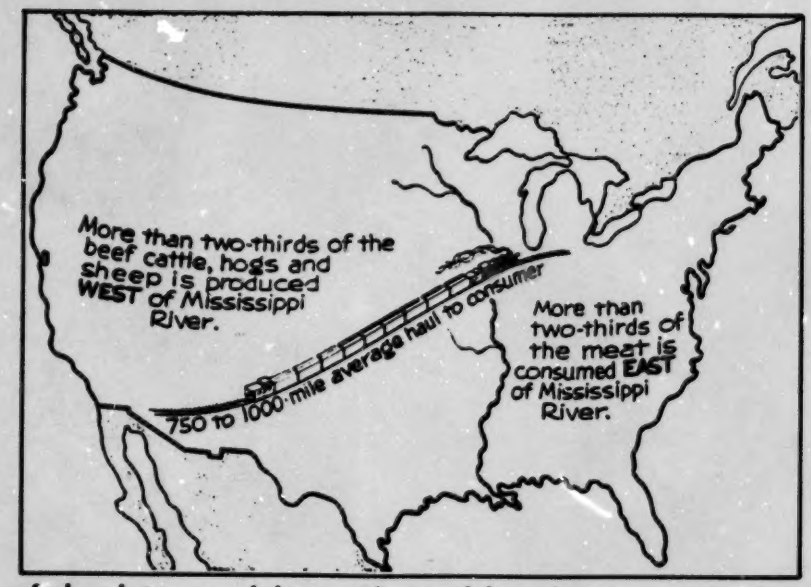
What livestock markets are available to you?

1) Use maps in handout

F. Summary

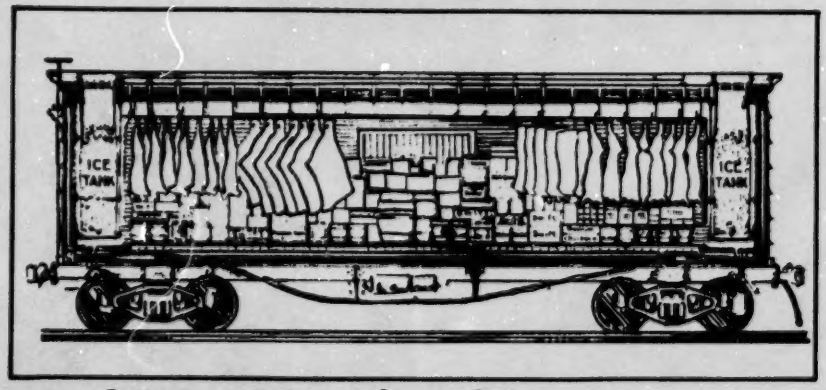
G. Exam and/or evaluation

The Meat Industry Before 1860


More than two-thirds of the beef cattle, hogs and sheep is produced WEST of Mississippi River.
750 to 1000-mile average haul to consumer
More than two-thirds of the meat is consumed EAST of Mississippi River.

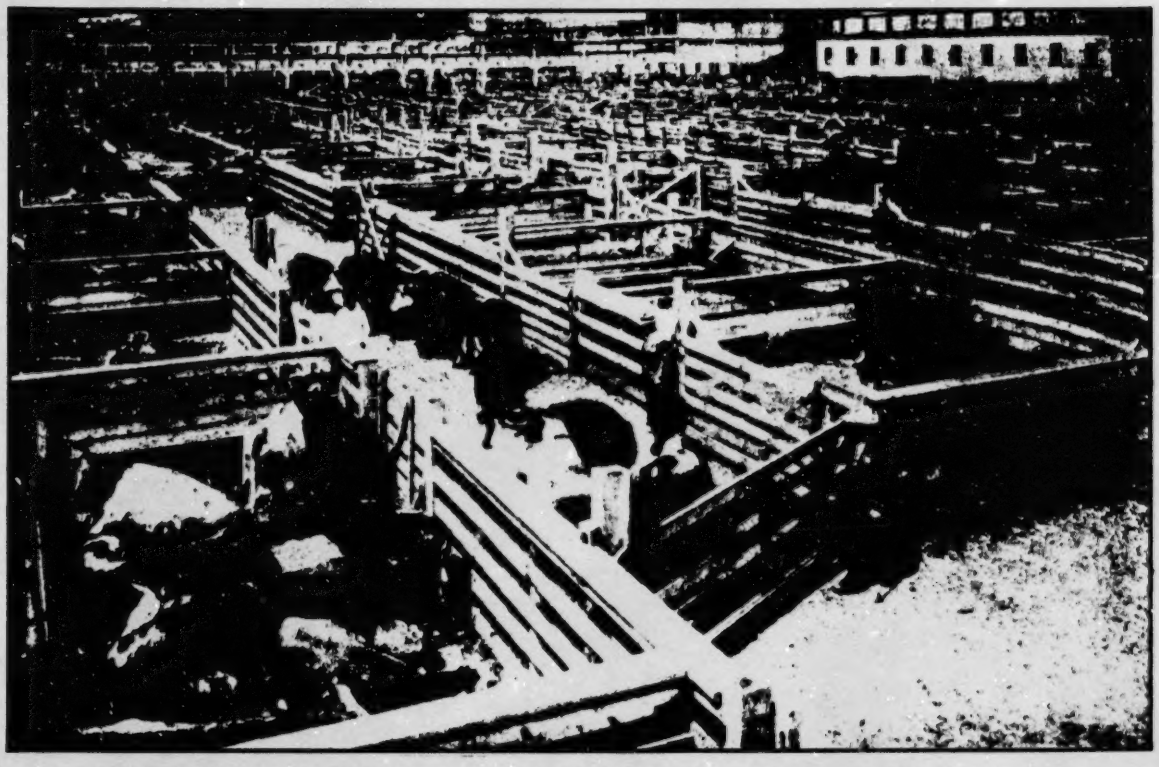
One of the big problems faced by the meat industry

Livestock train traveling to market

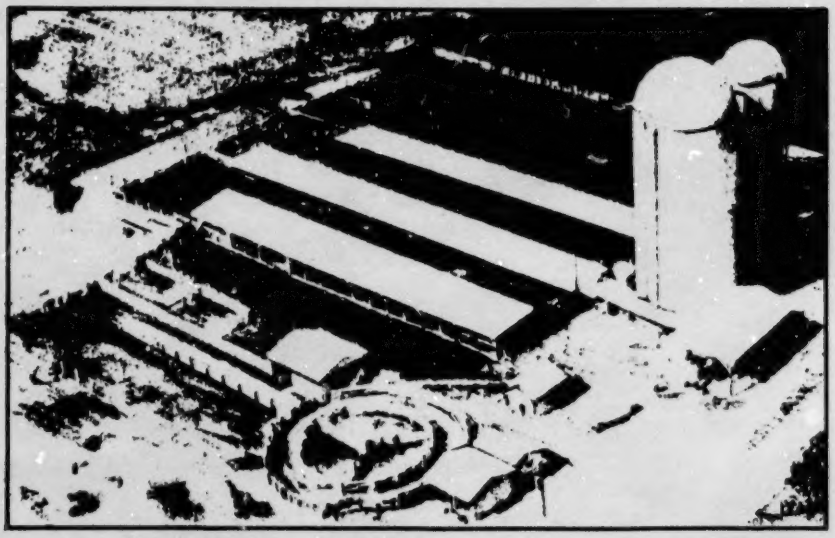


Cross-section of a refrigerator car

Trends in the Meat Industry



Part of the 7,600 pens in the Chicago Union Stock Yards



A feed lot set up

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THE MEAT SUPPLY

Based on Data from U.S. Census Bureau.
(Larger dots indicate locations of important livestock markets.)

Where It Comes From

Beef Cattle on Farms, Ranches
One dot = 5,000 Cattle

Hog on Farms
One dot = 10,000 Hogs

Lambs and Sheep on Farms and Ranches
One dot = 10,000 Sheep and Lambs

Where It Goes

Consumption of Beef
One dot = 2,500,000 Pounds

Consumption of Pork
One dot = 1,500,000 Pounds

Consumption of Lamb and Mutton
One dot = 500,000 Pounds

108

UNIT - MARKETING

Lesson 8 - What is the significance of marketing trends of livestock?

EXAM

_____ 1. Terminal markets handle about 13% of the cattle and 16% of the hogs in the United States. True or False

_____ 2. Packers secure most of their fat cattle and hogs through auctions. True or False

_____ 3. Missouri farmers have about 600 outlets in Missouri where one or more specie of livestock can be sold. True or False

_____ 4. Originally, livestock was produced for the individual family and some sold locally to butchers, neighbors and others. True or False

_____ 5. During the early years of livestock marketing, terminal markets sold less than 50% of the livestock. True or False

Lesson 8 - What is the significance of marketing trends in livestock?

ANSWERS TO EXAM

1. True
2. False
3. True
4. True
5. False

UNIT - MARKETING

Lesson 9 - How are cattle prices determined?

Objective: At the conclusion of the lesson, students will be able to determine the market price of their cattle.

Study Questions:

1. What factors determine the value of fat cattle?
2. How would you use these factors in pricing cattle?
3. List some other points which affect the price of cattle.
4. How can you help reduce "shrink"?
5. What are the seasonal price trends of cattle?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doane's
3. Price Charts from Farm Credit Bank, Wichita
4. Transparencies
   a. TM-20: Good Stocker and Feeder Steer
   b. TM-21: Choice Feeder Steer Calves
   c. TM-22: Choice Slaughter Steer

UNIT - MARKETING

Lesson 9 - How are cattle prices determined?

TEACHING PROCEDURE

A. Review cattle market trends and available markets.

B. Motivation: What did you receive for your cattle when you took them to market? Were you satisfied with the price? Did you know what they were worth before you took them to market?

C. Assignment

D. Supervised study

E. Discussion

1. Be sure students understand the three factors that determine the value of fat cattle and how to estimate it. The booklet, "Meat Evaluation Handbook[1]", has excellent pictures showing this. A field trip to a feed lot and/or local slaughter house would also be desirable.

   What factors determine the value of fat cattle?

   1) Quality grade
   2) Yield grade
   3) Dressing percentage

2. Use the Daily Market Summary to get wholesale beef prices and determine value of steers viewed on field trip or use examples.

   How would you use these factors in pricing cattle?

   1) (price of choice #3 carcass x dressing %) + by-product value - $25 = live value price

3. Let students suggest these points and write them on the board. Show how each of these will affect the price they calculated in question 2. Have them "tie" all of these together to determine their best selling method and location.

[1]Published by National Livestock and Meat Board, 36 S. Wabash Ave., Chicago, Illinois 60603

List some other points which affect the price of cattle.

1) Shrink
2) Packer's needs
3) Adjustment for off-grade cattle
4) Transportation
5) Other

4. Ask students to point out importance (dollar value) of shrink and then suggest methods of reducing.

   How can you help reduce "shrink"?

   1) Withdraw protein 48 hours prior to shipment
   2) Reduce grain to half feed day before shipment
   3) Provide grass hay free-choice last 2-3 days
   4) No grain 12 hours before shipment
   5) Allow grain and hay at market before sale
   6) Others at auctions, etc.

5. Ask students to describe the seasonal price trends of cattle. Refer to the student reference for long-time trends.

   What are the seasonal price trends of cattle?

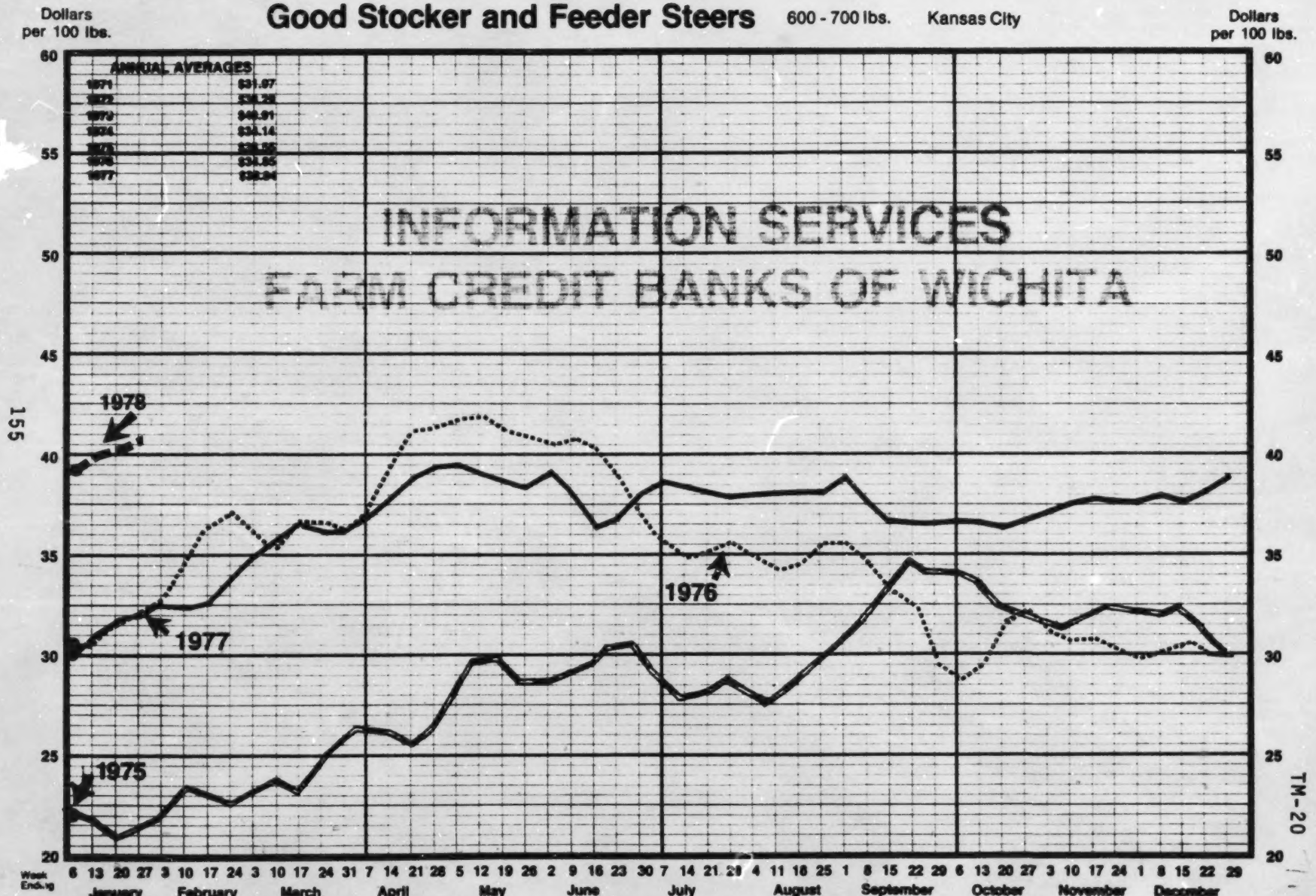
   1) Fat cattle do not have a consistent pattern.
   2) Slaughter cows usually peak in the spring and are low in the fall.

F. Summary

G. Exam and/or evaluation

Good Stocker and Feeder Steers

600 - 700 lbs. Kansas City

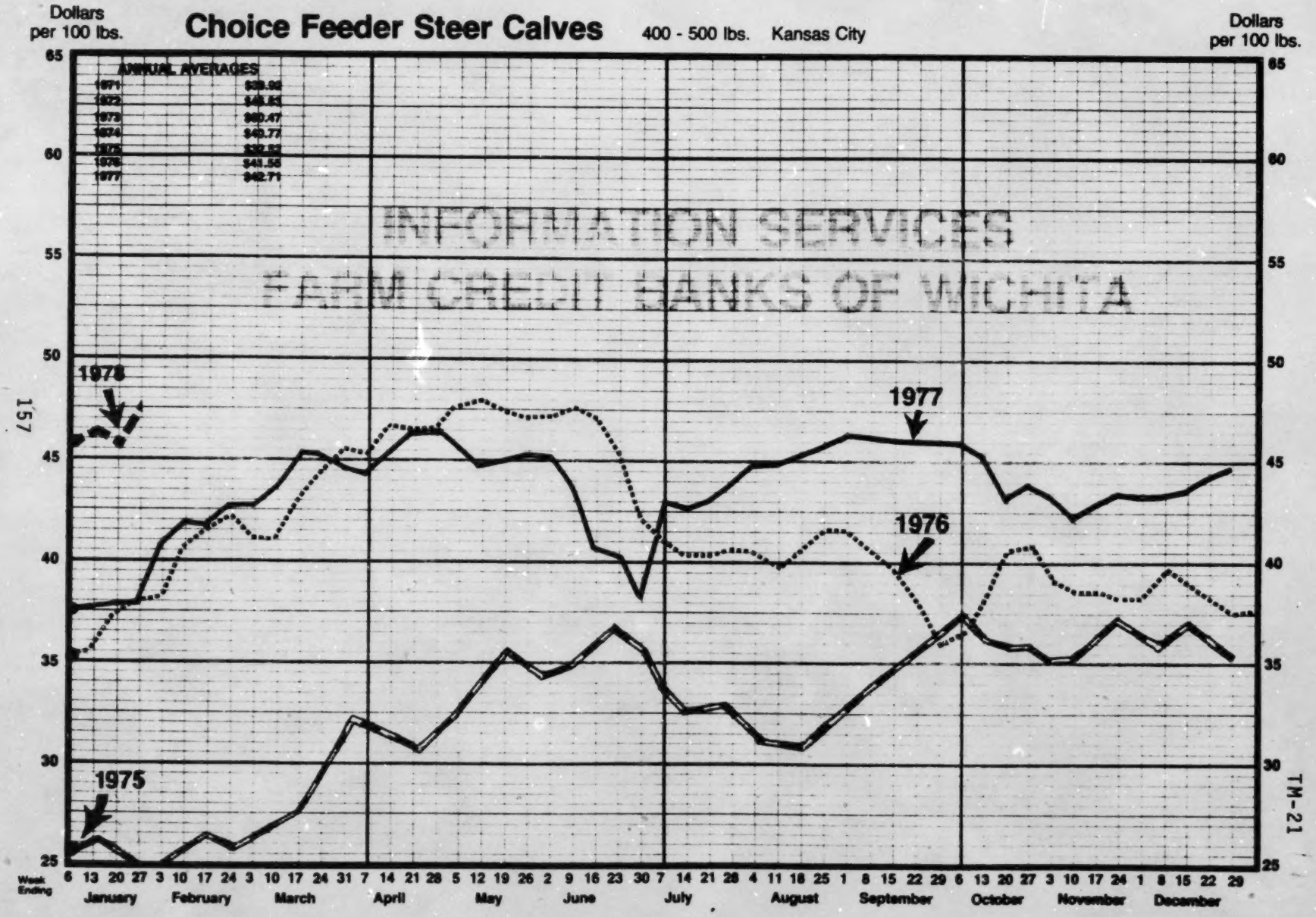


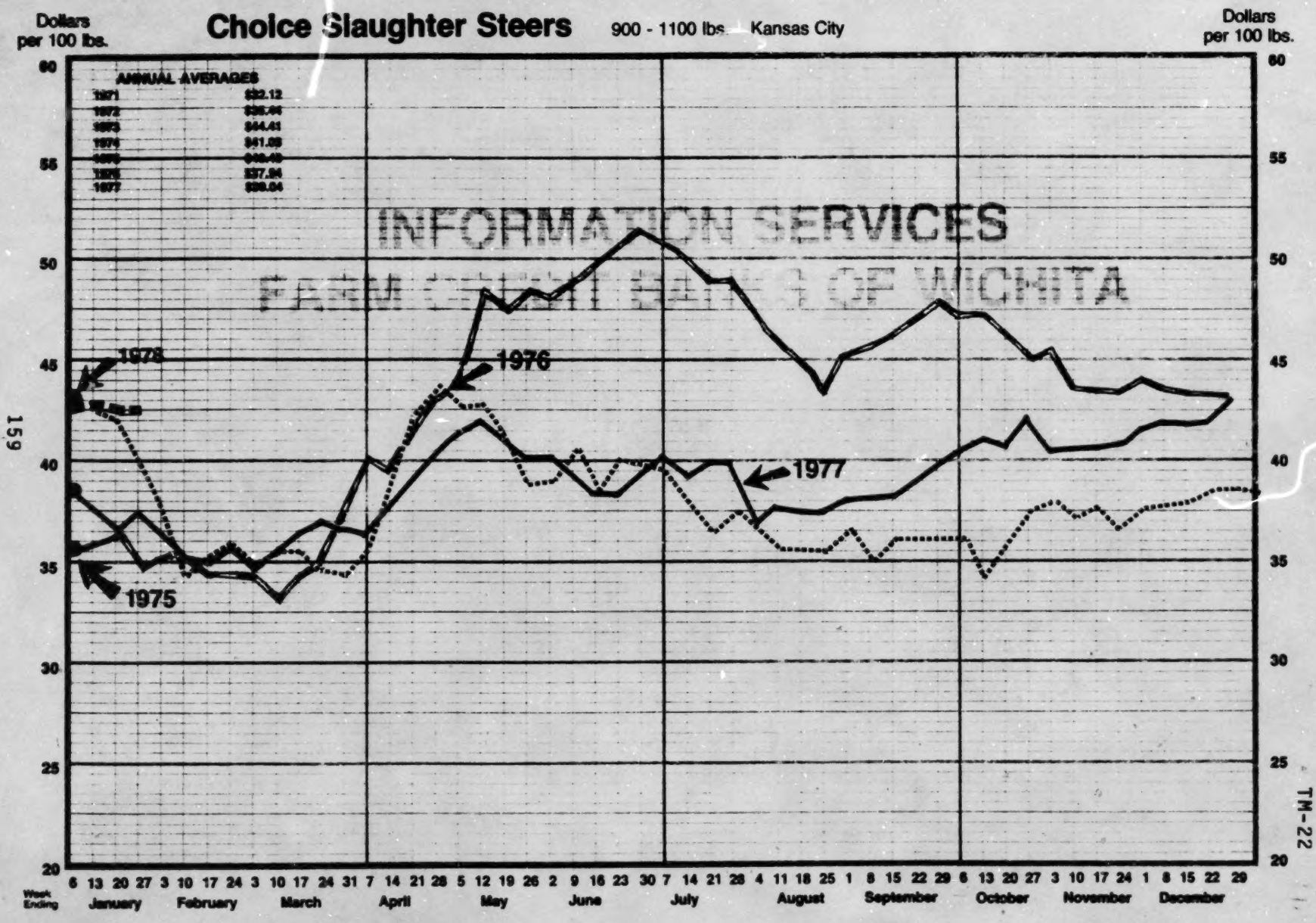
155

TM-20

114

115


Dollars per 100 lbs.
Choice Feeder Steer Calves
400 - 500 lbs. Kansas City
Dollars per 100 lbs.
ANNUAL AVERAGES
1971 $39.56
1972 $48.83
1973 $60.47
1974 $49.77
1975 $39.82
1976 $48.56
1977 $42.71
INFORMATION SERVICES
FEDERAL RESERVE BANKS OF WICHITA
1978
1977
1976
1975
65
60
55
50
45
40
35
30
25
Week Ending
6 13 20 27 3 10 17 24 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 7 14 21 28 4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29
January February March April May June July August September October November December
157
TM-21



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TM-22

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UNIT - MARKETING

Lesson 9 - How are cattle prices determined?

EXAM

_____ 1. What factors are used to determine the yield grade of cattle?

a. _____

b. _____

c. _____

d. _____

_____ 2. Quality grade is primarily an indication of the _____ of an animal.

a. age
b. color of the meat
c. finish
d. breed
e. none of the above

_____ 3. In determining the quality of a carcass, what two factors are considered?

a. _____

b. _____

_____ 4. The price of fat cattle is based on three factors:

a. _____

b. _____

c. _____

_____ 5. Yield grade refers to:

a. dressing percentage
b. a grade as Prime, Choice, etc.
c. amount of shrink
d. cutability of a carcass
e. none of the above

_____ 6. Generally, the fatter a steer is at slaughter, he will more likely:

a. have a higher dressing percentage
b. have a poorer yield grade (5 vs. 1)
c. sell for more per pound
d. a and b above
e. a and c above

_____ 7. If cattle by-products are selling for about $25/head and choice #3 steer beef is $70.00/cwt., I could expect to receive which of the following prices for my steers that I estimate will dress 62% and grade choice 3s?

a. $43.40
b. $62.00
c. $37.00
d. $45.25
e. $39.75

_____ 8. What is the goal of most feeders of fat steers for the following standards?

a. quality grade - _____

b. yield grade - _____

c. dressing % - _____

_____ 9. Heifers have a (higher, lower) dressing percentage than steers.

_____10. Fat cattle are usually the highest price in:

a. November
b. January
c. not a consistent pattern
d. stay the same all year
e. none of the above

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UNIT - MARKETING

Lesson 9 - How are cattle prices determined?

ANSWERS TO EXAM

1. a. adjusted fat thickness
   b. percent kidney, pelvic, and heart fat
   c. hot carcass weight
   d. ribeye area

2. c

3. a. maturity
   b. marbling

4. a. quality grade
   b. yield grade
   c. dressing percentage

5. d

6. d

7. a

8. a. choice
   b. 3
   c. 62%

9. lower

10. c

UNIT - MARKETING

Lesson 10 - How is the value of market hogs determined?

Objective: At the conclusion of this lesson, students will be able to market hogs by selecting the most profitable method.

Study Questions:

1. What factors determine the value of market hogs?
2. What are some desirable practices in marketing hogs?
3. What are the price trends for hogs?
4. When should you farrow or buy feeder pigs?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doane's
3. Transparency

   TM-23: Choice 200-220 lb. Hogs
4. Handout

   HO-22: Hog Carcass Value

UNIT - MARKETING

Lesson 10 - How is the value of market hogs determined?

TEACHING PROCEDURE

A. Review

B. Motivation: Do any of you raise hogs? Have you sold hogs at the local market? Was the price you received close to what you expected?

C. Assignment

D. Supervised study

E. Discussion

1. List the three factors on the board as students suggest them. If data from local carcass shows is available, use it to demonstrate the relative value of different hogs. Let students calculate the value of hogs on HO-22.

   What factors determine the value of market hogs?

   1) Grade
   2) Dressing percentage
   3) Percent of 4 primal cuts

2. List the practices on the board as students suggest them. Make some phone calls on today's market and determine the best place to sell today (remember costs). Also, for students that are not continuously farrowing year round, calculate months to farrow to take advantage of seasonal cycles.

   What are some desirable practices in marketing hogs?

   1) Know relative value of hogs
   2) Compare bids
   3) Deduct costs
   4) Aim for seasonally high prices

3. Allow students to review charts to understand average hog cycles as well as variations. Use charts from Farm Credit Banks, Wichita, Kansas to show current trends. Have students keep current market price charts.

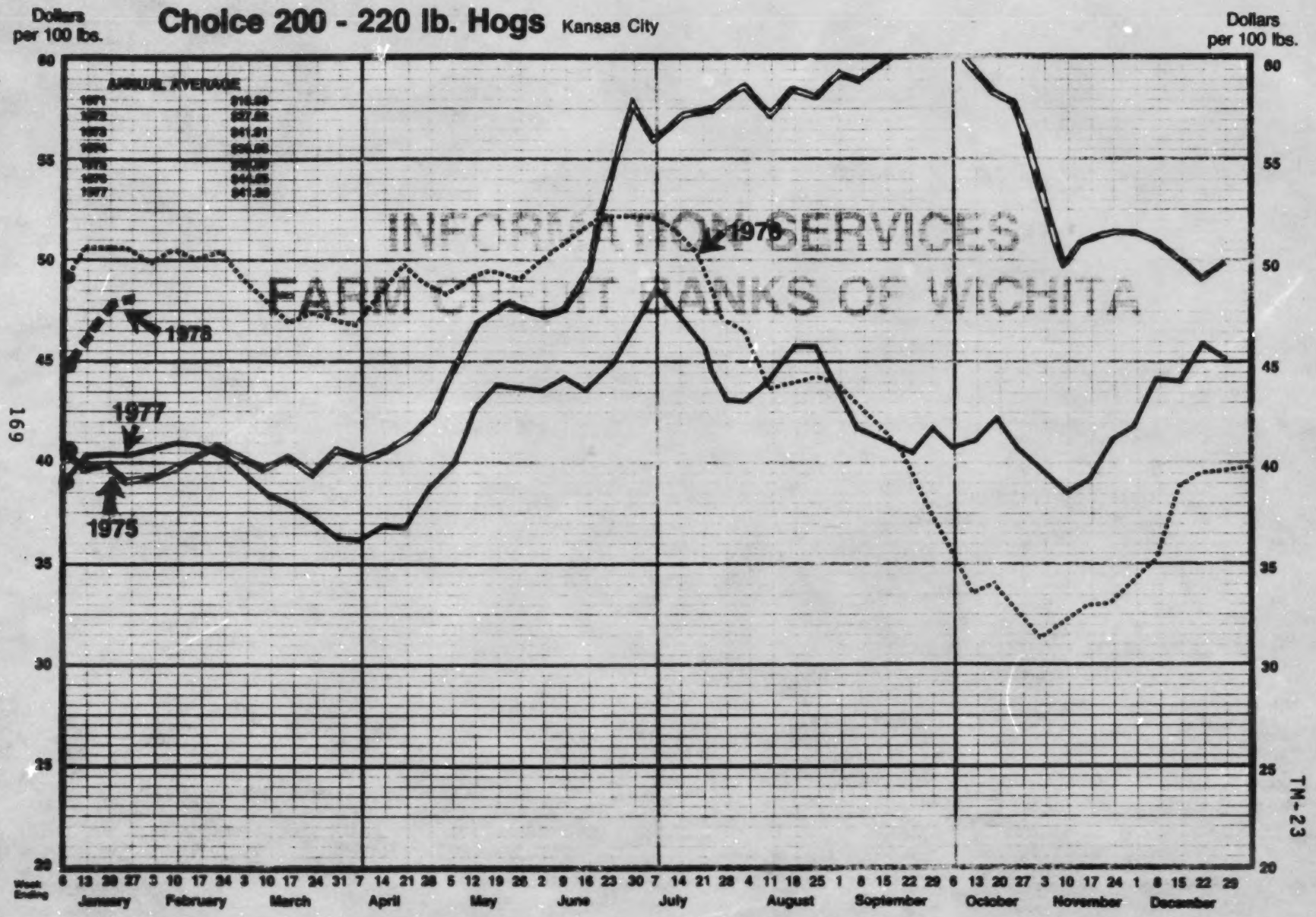
What are the price trends for hogs?

1) Hogs are usually highest in July
2) Hogs are usually cheapest in November

4. Let students calculate farrowing dates; dates to purchase feeder pigs, etc., to sell at most opportune time.

When should you farrow or buy feeder pigs?

1) Farrow Dec.-Jan. and June-July
2) Purchase feeder pigs based on 1.5 pounds per day gain


Dollars per 100 lbs.
Choice 200 - 220 lb. Hogs Kansas City
Dollars per 100 lbs.
ANNUAL AVERAGE
1978
1977
1975
INFORMATION SERVICES
FARM CREDIT BANKS OF WICHITA
169
TN-23
Week Ending
January
February
March
April
May
June
July
August
September
October
November
December

HOG CARCASS VALUE

Two producers brought hogs to the Livestock Yard. When these hogs were sold, the individual producers could not understand why there was a difference in the price received for each pen of hogs. Assume that each producer's hogs had an average 220# weight per hog. Mr. Stone's hogs had a 72% dressing percentage and Mr. Wilson's a 71% dressing percentage.

Cut-Out Group	Value of Each Portion Per Pound	Percentage of Carcass in Each Group				
		Mr. Stone	Lbs. In Group	Value	Mr. Wilson	Lbs. In Group	Value
Lean Cuts, (Hams, Loins, Picnics, Boston Butts)	82¢	58%			54%		
Fat for Lard	13¢	8%			10%		
Bellies	66¢	21%			20%		
Miscellaneous	44¢	2%			3%		
Offal, Waste and by-products	0¢	11%			13%		

1. The cut-out value of Mr. Stone's 220 pound hog:

   a. $88 to $92
   b. $93 to $97
   c. $98 to $102
   d. $103 to $107
   e. none of these

2. Assume that on the same day, the live weight hog price was $44.50 per cwt. What was the total dollars of ADVANTAGE or DISADVANTAGE by Mr. Wilson, obtained because he sold a 220 pound hog on a cut-out value basis?

   a. + $1 to $3
   b. + $4 to $6
   c. - $1 to $3
   d. - $4 to $6
   e. none of these

ANSWERS

Cut-Out Group	Value of Each Portion Per Pound	Percentage of Carcass in Each Group					
		Mr. Stone	Lbs.[1] In Group	Value[2]	Mr. Wilson	Lbs.[1] In Group	Value[2]
Lean Cuts, (Hams, Loins, Picnics, Boston Butts)	82¢	58%	91.8#[3]	$75.28[4]	54%	84.3#	$69.13
Fat for Lard	13¢	8%	12.7#	$ 1.65	10%	15.6#	$ 2.03
Bellies	66¢	21%	33.3#	$21.98	20%	31.2#	$20.59
Miscellaneous	44¢	2%	3.2#	$ 1.41	3%	4.7#	$ 2.09
Offal, Waste and by-products	0¢	11%	17.4#	-0-	13%	20.3#	-0-
	TOTAL	100%	158.4#[5]	$100.32		156.1#	$93.84

[1]Lbs. in group = live weight x dressing percentage x percent of carcass in each group.

[2]Value = Lbs. in each group x value of each portion per pound.

[3]Pounds of lean cuts for Mr. Stone = 220 x .72 x .58 = 91.8

[4]Value of lean cuts for Mr. Stone = 91.8# x .82 = $75.28

[5]Check for accuracy: live weight x dressing percentage = total pounds in group.

220# x .72 = 158.4#

Question 1: C

Question 2: D

UNIT - MARKETING

Lesson 10 - How is the value of market hogs determined?

EXAM

_____ 1. Market hogs grades are Prime, Choice, Good, etc. True or False

_____ 2. A market hog with a dressing percentage of 70% and 56% of the carcass weight in the 4 primal cuts would be called a No. _____.

_____ 3. Market hogs are usually highest in:

a. February and July
b. April and November
c. not a consistent pattern
d. stay the same all year
e. none of the above

_____ 4. What are the four primal cuts of a hog carcass?

a. _____

b. _____

c. _____

d. _____

_____ 5. What are the main factors which relate the market value of hogs?

a. _____

b. _____

c. _____

d. _____

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UNIT - MARKETING

Lesson 10 - How is the value of market hogs determined?

ANSWERS TO EXAM

1. False

2. 39

3. a

4. a. ham
   b. loin
   c. picnic
   d. butt

5. a. grade
   b. dressing percent
   c. percent of carcass in 4 primal cuts
   d. weight

UNIT - MARKETING

Lesson 11 - What is involved in marketing livestock by the carcass and grade method (grade and yield).

Objective: At the conclusion of the lesson, students will be able to determine when it is profitable to use the grade and yield method of marketing.

Study Questions:

1. How much livestock is sold carcass grade and weight?
2. What are some examples of when carcass grade and weight selling might be best?
3. What are some precautions in selling carcass grade and weight?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doane's
3. Handout

   HO-23: Contract for Sale of Hogs Example

UNIT - MARKETING

Lesson 11 - What is involved in marketing livestock by the carcass weight and grade method (grade and yield)?

TEACHING PROCEDURE

A. Review - marketing of cattle and hogs.

B. Motivation: Can you get more for your hogs by slaughtering them and selling them according to their yield? Do you know anyone who has marketed his or her livestock by the grade and yield method?

C. Assignment

D. Supervised study

E. Discussion

1. Discuss so students understand carcass grade and weight marketing. Point out that it has not been widely accepted, but there may be situations in which it is to their advantage.

   How much livestock is sold carcass grade and weight?

   1) 6% hogs

2. Let students give the examples and also point out that the live weight bid and carcass bid will be the same if the live weight bid reflects the animal's true value.

   What are some examples of when carcass grade and weight selling might be best?

   1) Producing high quality animals
   2) Producing calves and carrying to market weight
   3) Have off-type cattle

3. Students need to understand items that should be considered when selling from live evaluations carcass grade and weight. Listing these on the board and discussing them and pointing out examples will be necessary.

   What are some precautions in selling grade and yield?

   1) Price for deviations from standards
   2) Weighing conditions
   3) Carcass blemishes

4) Condemned carcasses
5) Firm price
6) Settlement procedures
7) Slaughter on day delivered to plant

F. Summary

G. Exam and/or evaluation

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SAMPLE CONTRACT FOR SALE OF HOGS

CONTRACT FOR SALE OF HOGS

AGREEMENT made this _____ day of _____, 19____, between _____ of _____ (hereafter referred to as Seller) and _____ of _____ (hereafter referred to as Buyer), witnesseth:

1. QUANTITY: Seller hereby agrees to sell and deliver and Buyer hereby agrees to buy and receive _____ pounds of live hogs (Barrows and Gilts) plus or minus 220 pounds (or the average weight of hogs delivered).

2. DESCRIPTION AND PRICE: Hogs shall be described and priced as follows:

CARCASS-MERIT: Payment for hogs delivered under this agreement shall be calculated under the terms and conditions of the Buyer's Carcass-Merit program in existence on delivery date. Barrows and Gilts weighing between 200 and 230 lbs. live weight at a base price of $_____ per live cwt. Corresponding carcass price is determined by dividing live price for each weight range by standard dressing percent for each equivalent weight range. Carcass value is determined by multiplying carcass price by hog carcass weight. All carcasses must pass U.S.D.A. inspection. In the event a carcass is retained or condemned, Buyer shall pay only salvage value.

LIVE MERIT: Barrows and Gilts weighing between 200 and 230 lbs. in the usual assortment grading Buyer's grades 1's to 3's (not to exceed 10 percent 3's) at a price of $_____ per live cwt. Hogs not meeting weight or grade specifications will be priced in accordance with Buyer's prevailing price differentials for those weights or grades in effect at time of delivery. All hogs must in sound condition and pass U.S.D.A. ante-mortem inspection.

3. DELIVERY DATE AND LOCATION: Said hogs are, or will be, located at _____ in _____ County, state of _____. Said hogs are to be delivered by Seller to Buyer at _____ on the day specified by Buyer during the week beginning _____, 19____, in good and merchantable condition and suitable for immediate slaughter to produce meat for human consumption. Title to said hogs shall pass to Buyer upon delivery. By mutual agreement of Buyer and Seller, the delivery date may be changed to the week prior to or the week following the date specified herein. Any further variation in delivery dates shall be subject to the provisions of Section 7, below.

4. CREDIT REQUIREMENTS: Seller agrees to furnish Buyer necessary credit information and documentation, and upon approval by Buyer's Credit Department, which approval shall not be unreasonably withheld, Seller may demand and Buyer agrees to pay Seller $5.00 per head (assuming 220 lb. live wt.) as part payment for said hogs. In the event Buyer's Credit Department fails to approve this contract within 20 days from the date of this contract, Buyer shall have the right, at its option, to cancel this contract upon written notice to seller within 30 days of the date of this contract.

Seller does not demand part payment of $5.00 per head.

5. FINAL PAYMENT: Buyer agrees to pay seller the balance of the purchase price for said hogs before the close of the business day following determination of the amount of the purchase price.

6. LIENS, SECURITY INTEREST: Said hogs are, on the date hereof, subject to a lien, security interest, or chattel mortgate, in the amount of $_____ in favor of _____. Seller represents and warrants that he/she will obtain the release of all liens, security interest, and chattel mortgages on said hogs prior to final payment and will submit proof thereof to Buyer. In the event Seller fails to submit proof of such release, final payment for said hogs will be made jointly to Seller and lien holder.

7. BREACH OF CONTRACT: Upon Seller's failure, for any reason whatever, to deliver to Buyer all hogs purchased hereunder as herein required, Seller shall promptly refund to Buyer all money advanced on such undelivered hogs plus interest on refunded advance and shall be liable to buyer in the amount by which the prevailing market price on the date such hogs should have been delivered exceeds the contract price for such undelivered hogs. Seller shall reimburse Buyer for its reasonable expenses incurred in the collection of damages herein provided.

8. ENTIRE AGREEMENT: This contract contains the entire agreement between Buyer and Seller and cannot be varied orally. It shall be binding on the respective heirs, successors and assigns of the parties.

IN WITNESS WHEREOF, the parties have executed this agreement on the date first above written.

_____

By _____ Seller

By _____ Buyer

Lesson 11 - What is involved in marketing livestock by the carcass weight and grade method (grade and yield)?

EXAM

_____ 1. Carcass grade and weight marketing will always net the producer more dollars. True or False

_____ 2. List four cautions in selling grade and yield.

a._____

b._____

c._____

d._____

_____ 3. When selling carcass grade and weight, the producer delivers the animals to the packing plant. They are slaughtered, weighed and graded prior to pricing and payment. True or False

_____ 4. The Missouri Department of Agriculture estimates more than 40% of the hogs in Missouri are sold carcass grade and weight. True or False

_____ 5. When you sell carcass grade and weight, you think your livestock are worth more than they will sell for on a live weight basis. True or False

UNIT - MARKETING

Lesson 11 - What is involved in marketing livestock by the carcass weight and grade method (grade and yield)?

ANSWERS TO EXAM

1. False

2. Any of the following six:

   a. Know prices for different grades.
   b. Know carcass weighing procedures.
   c. Discounts for damaged carcasses.
   d. Determine who loses on condemned carcasses.
   e. Know there is a firm price.
   f. Know settlement procedures.

3. True

4. False

5. True

UNIT - MARKETING

Lesson 12 - What is involved in the marketing of feeder cattle and feeder pigs?

Objective: At the conclusion of the lesson, students will be able to select profitable marketing procedures for feeder cattle and feeder pigs.

Study Questions:

1. How can you determine weight to sell feeder calves?
2. What are the seasonal price cycles for feeder cattle?
3. What are some practices in selling feeder cattle?
4. What markets are available for feeder pigs?
5. What method of "formula" pricing could you use?
6. What are some practices in marketing feeder pigs?

References:

1. Student Reference in Agricultural Marketing
2. Profit Marketing - Doane's
3. Handouts
   a. HO-24: Steer Calf Budget, Wintered for Summer Grazing
   b. HO-25: Short Yearling Steer Budget, Summer Grazed Only

UNIT - MARKETING

Lesson 12 - What is involved in the marketing of feeder cattle and feeder pigs?

A. Review trends in the marketing of livestock and available markets.

B. Motivation: What are feeder cattle? How many students market feeder animals? Where are the best available markets?

C. Assignment

D. Supervised study

E. Discussion

1. Use current market prices and the relative prices of different weight cattle. Obviously, cattle can be marketed at about any weight, condition, etc. This question relates to selling at weaning vs. selling when ready for the feedlot. Figure selling price of gain for backgrounding. (growing from 400# to 750#)

   How can you determine weight to sell feeder cattle?

   1) Cost of adding weight
   2) Price for added weight (not selling price)
   3) On an average, when 700# feeders sell for 89% or more of 400# calves, it pays to background.

2. Refer to chart in student handout and also to charts from Farm Credit Banks, Wichita. This would be a good point to prepare a budget on grazing steers or wintering so students can see ▸ cause of seasonal price cycles.

   What are the seasonal price cycles for feeder cattle?

   1) Lighter cattle are higher in May; lower in fall
   2) Heavier cattle have less variation
   3) Long time cycles may over-ride seasonal cycles

3. Let students identify five considered situations necessary for highest price of feeder cattle. List on the board and let them identify how each will work for them.

What are some practices in selling feeder cattle?

1) Avoid excessive shrinkage
2) Quality calf
3) Perform needed practices
4) Sell at best weight
5) Sell at best seasonal price

4. List four broad categories of markets on the board and let students identify local markets that fit into each group. Use the Daily Market Summary to identify prices at these markets and find out costs associated with each.

What markets are available for feeder pigs?

1) Direct
2) Regular auctions
3) Special auctions
4) Formula pricing

5. Frequently, a producer and feeder desire a pricing method that lets them work together and yet rewards the producer for quality pigs and reflects changes in the market. Discuss method outlined in handout.

What method of formula pricing could you use?

1) 1.6 x price/cost of market hog for 60# pig
2) 1.8-2.0 x price/cwt. of market hog for 40# pig

6. As students suggest these practices, list them on the board and discuss.

What are some practices in marketing feeder pigs?

1) Produce quality pigs
2) Plan for seasonal price cycles
3) Sell weight most profitable
4) Check alternative markets

F. Summary

G. Exam and/or evaluation

STEER CALF BUDGET, WINTERED FOR SUMMER GRAZING

Description of Production: Choice steer calf purchased in November, sold in April.

			MY FARM
Production: Pounds of gain per head Days owned Average daily gain	125 150 .83		
1. GROSS RECEIPTS PER HEAD	525 lbs. @ $36/cwt.	$189.00	
2. PURCHASE COST PER HEAD	400 lbs. @ $34/cwt.	$136.00	
3. Feed: Corn equivalent, $2.15/bu. Protein, salt, minerals, & additives, $6.50/cwt. Corn silage, $15/T. Mixed hay, $40/T. Grass hay, $35/T. Pasture, $5/AUM.	 150 lbs. .8 T. .5 AUM	 -- $ 10.00 -- -- 28.00 2.50	
4. TOTAL FEED COSTS		$ 41.00	
5. Machinery costs, feed preparation, etc.		$ 1.00	
6. Veterinary & medicine		2.00	
7. Other livestock materials & services[1]		5.00	
8. Utilities		1.50	
9. Death loss[2]		2.50	
10. Operating interest[3]		6.00	
11. TOTAL OTHER VARIABLE COSTS (add Lines 5 through 10)		$ 18.00	
12. TOTAL ALL VARIABLE COSTS (Lines 2+4+11)		$195.00	
13. INCOME OVER VARIABLE COSTS[4] (Line 1 minus Line 12)		(-$ 6.00)	
14. Labor hours		3.0 hours	

[1] Includes hauling, yardage, commission, etc.

[2] 2% of purchase cost (Line 2).

[3] Purchase cost (Line 2) + 50% of sum of Lines 4 through 9 times percent of year owned times 9% interest.

[4] Other cash costs such as real estate and property taxes, building insurance and repairs, hired labor, and miscellaneous expense are to be accounted for on Form 6, FM 7536.

Rev. 6/75

SHORT YEARLING STEER BUDGET, SUMMER GRAZED ONLY

Description of Production: Buy 525 lb. steer in April, sell 750 lb. steer in October-November.

			MY FARM
Production:			
Pounds of gain per head		225	
Days owned		200-210	
Average daily gain		1.1	
1. GROSS RECEIPTS PER HEAD	750 lbs. @ $32/cwt.	$240.00	
2. PURCHASE COST PER HEAD	525 lbs. @ $36/cwt.	$189.00	
3. Feed:			
Corn equivalent, $2.15/bu.		--	
Protein, salt, minerals, & additives, $6.50/cwt.	20 lbs.	$ 1.50	
Corn silage, $15/T.		--	
Mixed hay, $40/T.		--	
Grass hay, $35/T.		--	
Pasture, $5/AUM.	5.7 AUM	28.50	
4. TOTAL FEED COSTS		$ 30.00	
5. Machinery costs, feed preparation, etc.		$ 1.00	
6. Veterinary & medicine		1.50	
7. Other livestock materials & services[1]		6.00	
8. Utilities		.50	
9. Death loss[2]		2.00	
10. Operating interest[3]		11.00	
11. TOTAL OTHER VARIABLE COSTS (add Lines 5 through 10)		$ 22.00	
12. TOTAL ALL VARIABLE COSTS (Lines 2+4+11)		$241.00	
13. INCOME OVER VARIABLE COSTS[4] (Line 1 minus Line 12)		(-$ 1.00)	
14. Labor hours		1.0 hours	

[1] Includes hauling, yardage, commissions, etc.

[2] 1% of purchase cost.

[3] Purchase cost (Line 2) + 50% of sum of Lines 4 through 9 times percent of year owned times 9%.

[4] Other cash costs such as real estate and property taxes, building insurance and repairs, hired labor, and miscellaneous expense are to be accounted for on Form 6, FM 7536.

Rev. 6/75

Lesson 12 - What is involved in the marketing of feeder cattle and feeder pigs?

EXAM

_____ 1. Farmer A has 400# steer calves that she raised. She is considering backgrounding and carrying to 700#. The market price (also expected selling price) is 40¢ for 400# steer calves and 45¢ for 700# steer calves. She would make more profit backgrounding them if her cost of adding the 300# gain was a maximum of:

a. 42¢/lb.
b. 45¢/lb.
c. 52¢/lb.
d. 40¢/lb.
e. 32¢/lb.

_____ 2. 400# feeder cattle prices fluctuate more seasonally than do 700# feeder cattle. True or False

_____ 3. On an average, when 700# feeder cattle sell for _____% or more of 400# feeder cattle, it pays to background.

_____ 4. Formula pricing of feeder pigs has been a satisfactory method of marketing feeder pigs. True or False

_____ 5. Feeder pig prices vary more seasonally than do market hogs. True or False

UNIT - MARKETING

Lesson 12 - What is involved in the marketing of feeder cattle and feeder pigs?

ANSWERS TO EXAM

1. C (400# x .40 -$160; 700# x .45 = $315; $315 - $160 = $155; $155 ÷ 300# = 52¢)
2. True
3. 89%
4. False
5. True

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UNIT - MARKETING

Lesson 13 - How can I market livestock with a protected price?

Objective: At the conclusion of the lesson, students will be able to market livestock with a protected price.

Study Questions:

1. What are methods of marketing livestock with a protected price?
2. List methods of contracting and explain each.
3. What is forward contracting?
4. How does forward contracting work?
5. What are advantages of forward contracting?
6. What is the main disadvantage of forward contracting?

Reference:

1. Student Reference in Agricultural Marketing
2. Transparency

   TM-24: Livestock Protected Price Marketing
3. Handouts
   a. HO-26: Feeder Pig Marketing Agreement
   b. HO-27: Contract for Sale of Hogs
   c. HO-28: Hedging Livestock Analysis

Lesson 13 - How can I market livestock with a protected price?

TEACHING PROCEDURE

A. Review

B. Motivation: Ask students if they would buy some feeder pigs if they could be guaranteed $15/head profit. Should they feed some cattle if they were sure there was a profit? Use an example of a local farmer that uses price protection of some type. Do students think this is a good idea?

C. Assignment

D. Supervised study

E. Discussion

1. List the three methods on the board as students suggest them. Discussion of detail should be limited for later study questions.

   What are methods of marketing livestock with a protected price?

   1) Contract production
   2) Forward contracting
   3) Futures market

2. Use TM-24 as students discuss the different methods of marketing with contracts. Students should understand who assumes risk in each method - situations in which each might be desirable or undesirable. Also, if a student or parents are using any of these types of contracts, let them give examples and details. Also, if poultry is important in the community, this could be discussed. Most poultry contracts are of Production Payment A type. If possible, also have an example of a contract used in the community and have a local person that is contracting explain to the class.

   List methods of contracting and explain each.

1) Feeder Livestock Marketing Program (sample on HO-26)
2) Breeding Stock Leasing Contract
3) Production Payment A
4) Production Payment B

3. Let students give the definition and also an example. Hogs might be a better example since these might be more widely available in Missouri than cattle. Point out that price risk is the only risk removed.

What is forward contracting?

1) Forward contracting is selling in advance for a known price, a certain amount and quality of livestock.

4. Distribute copies of the forward contract on HO-27 and discuss in relation to this question. Be sure students understand how price is determined and the quality of livestock involved in the contract. Also, point out that firms that forward contract hogs indicate their customers have no problems in meeting the quality standards. In the case of cattle, they are in effect delivered grade and yield. The farmer needs to know the discounts for differences in yield grades, dressing percentages and quality grades. Use HO-28 to determine profit today on contracting hogs and buying feeder pigs.

How does forward contracting work?

1) Price is based on futures prices - $2.50 under for hogs and $2.00 to $3.00 for cattle

5. List these advantages on the board as students suggest them. The advantages of no margin money and avoiding basis change are the main reasons most farmers use this compared to the futures market.

What are advantages of forward contracting?

1) Permits selling at known price
2) Avoids mechanics and margin money of futures
3) Deals with someone the farmer knows
4) Avoids basis change

6. Demonstrate the disadvantage of forward contracting compared to hedging with an example. If a farmer contracts hogs, say for $40/cwt. and the futures go up, the farmer can't buy back his or her contract as on the futures market and establish a new price objective. Most forward contracts provide a method for the farmer to get out of the contract in case of emergency as in the case of hogs dying, etc., but it has a penalty attached to it.

   What is the main disadvantage of forward contracting?

   1) Lack of flexibility

F. Summary

G. Exam and/or evaluation

   1. Use HO-28 as a quiz after working an example.

   2. Sample quiz

LIVESTOCK

PROTECTED PRICE MARKETING

A. CONTRACT PRODUCTION

1. FEEDER LIVESTOCK MARKETING PROGRAM
2. BREEDING STOCK LEASING CONTRACT
3. PRODUCTION PAYMENT A
4. PRODUCTION PAYMENT B

B. FORWARD CONTRACTING

1. SLAUGHTER HOGS
2. SLAUGHTER CATTLE

C. FUTURES MARKET

1. HEDGING
2. SPECULATING

SAMPLE FEEDER PIG MARKETING AGREEMENT

FEEDER PIG MARKETING AGREEMENT

This agreement between the_____, Hereinafter referred to as the "Association" and_____, of _____, _____Hereinafter referred to as the "Producer."

WITNESSETH:

Whereas the parties desire to jointly undertake production and marketing of quality feeder pigs of an improved meat type, now, therefore, the parties agree.

I. THE ASSOCIATION SHALL:

1. Inspect the breeding stock owned by the Producer and approve same for the project if such breeding stock meet the Association's requirements.
2. In the event the Producer does not have breeding stock that meets the Association's requirements the Association will arrange for, at Producer's request, the number and quality mutually agreed upon, to be used for the production of feeder pigs. Price and quality of breeding stock being secured must be mutually agreeable to the Producer and the Association.
3. Have right of entry to Producer's farm at any time for the purpose of inspecting the breeding stock or pigs covered under agreement.
4. Market all pigs under 100 pounds and over 45 pounds produced by Producer and delivered to designated concentration area on regular "Market Days," as designated by the Association, subject to the right of the Association to reject any pigs which are not in fit condition for marketing.
5. Pay Producer for pigs at a price based on orders being filled.
6. Market only those pigs passing inspection by Association and Veterinarian.

II. THE PRODUCER AGREES:

1. To market all feeder pigs produced on the Farm through the Assoiciation with the exception of breeding stock kept for breeding purposes.
2. To provide adequate and proper facilities necessary to produce healthy, quality pigs.
3. To follow a feeding and management program on both breeding stock and pigs acceptable to the Association.
4. Farrow a minimum of ten sows at approximately the same time.
5. Pay expense of veterinary service and animal health products in carrying out health and sanitation program required by the Association. This includes vaccination.
6. To deliver the feeder pigs covered by this agreement to area designated by Association on days designated by Association.
7. Market only pigs that will pass inspection by Association and Veterinarian.
8. To inform the Association on a card provided by the Association seven (7) days ahead of market day the approximate number and approximate average weight that will be delivered "market day."
9. That no additional breeding stock will be used in Feeder Pig Program without approval of the Association.

III. BOTH PARTIES MUTUALLY AGREE:

1. That this agreement shall remain in full force for a period of two years from date hereof and at the end of such period shall continue in effect for one year terms. However, either party may cancel this agreement at any time by giving other party ninety (90) days notice in writing. Once a Producer cancels out, he/she may not again become a Producer under this agreement until one full year has lapsed.

In witness whereof, the parties hereto have executed this agreement at _____, _____, This_____ day of_____, 19_____.

SAMPLE CONTRACT FOR SALE OF HOGS

CONTRACT FOR SALE OF HOGS

THIS CONTRACT, made this_____day of_____ 197_____, between_____, _____ of _____, hereinafter referred to as "Seller" and_____of _____hereinafter referred to as "Buyer"

WITNESSETH:

1. Seller agrees to sell and deliver F.O.B. to Buyer's yards at_____, Missouri, between the hours of 7:00 o'clock a.m. and 1:00 o'clock p.m. on a day specified by Buyer during the period commencing_____, 197_____, and ending _____, 197_____, _____pounds of hogs consisting of USDA Grade 1 and 2 barrows and gilts weighing from 200 to 230 pounds at a price of $_____ per hundred weight.

2. All hogs shall be free of infection, bruises or other unsound condition. Hogs weighing under 180 pounds and over 300 pounds shall not be deliverable. Any hogs weighing under 200 pounds or more than 230 pounds will be priced in accordance with weight price differentials in effect at the time of delivery. Hogs grading USDA Grade 3 will be discounted according to price discounts in effect at the time of delivery. Title to the hogs shall pass to Buyer upon weighing. Grading and sorting to be done by Buyer. Grading and sorting by Buyer to be final.

3. **Delivery:** Buyer will not call for or accept delivery other than during the period specified in paragraph 1 above. Seller shall deliver full contract amount to Buyer on day specified by Buyer. Buyer shall notify Seller at least one day prior to delivery. In the event Buyer does not call for delivery, the last day of the period specified in paragraph 1 above shall be the day of delivery.

4. Seller understands that Buyer will hedge its price risk on the hogs purchased hereunder by selling a futures contract on the Chicago Mercantile exchange which binds the Buyer to deliver the hogs under said futures contract. Upon Seller's failure, therefore, for any reason whatsoever to deliver as specified to Buyer all of the hogs purchased hereunder, Seller agrees to pay to Buyer the difference between the total selling price on the Chicago Mercantile Exchange of the futures contract initially entered into in connection with this agreement and the total cost to Buyer of buying back said futures contract on the Chicago Mercantile Exchange. In addition to the foregoing payment, Seller agrees to pay Buyer One Hundred Dollars ($100.00) per contract to defray Buyer's expenses incurred in selling and buying back futures contract on the Chicago Mercantile Exchange.

5. Seller represents that on the day of delivery the hogs will not be subject to lien or chattel mortgage, but in the event said hogs are subject to chattel mortgage or lien, to advise the Buyer in order that the purchase price check may be paid jointly to the Seller and the lien holder.

6. Seller shall reimburse Buyer for his/her reasonable expenses incurred in the collection of damages herein provided.

7. This agreement shall be binding on the parties hereto, their successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Contract for Sale of Hogs on the day first above written.

HEDGING LIVESTOCK ANALYSIS

		$ Cost per Head
I.	Production Costs	
	1. Purchase cost[1*] of feeder _____# x $_____ per cwt.	_____
	2. Feed cost _____# x $_____ per cwt.	_____
	3. Other production costs	_____
	4. Marketing costs	_____
	5. Total costs	_____
	6. Weight of finished animal _____	
	7. Total cost per cwt. $_____	
II.	Futures Contract	
	A. Futures prices (gross) per cwt.	$_____
	B. Difference between cash & futures price per cwt. _____	
	C. Average differential between cash prices at Futures Delivery Market and Local Market per cwt. _____	
	D. Commission and Margin Cost for futures contract per cwt. _____	
	E. Deduction or credits because livestock differed from contract specifications on weight and grade per cwt. _____	
	F. Total deduction or credits (B+C+D+E) per cwt. _____	
	G. Net Futures Price (A+or-F)	_____
	Net return to management, investment and unpaid labor, per cwt. (G-7)	_____

[1*]Use estimated value of feeder if produced on farm or purchased at a lighter weight.

UNIT - MARKETING

Lesson 13 - How can I market livestock with a protected price?

EXAM

_____ 1. A farmer that markets feeder pigs through a cooperative such as MFA's tele-auction has which of the following contracts:

a. Feeder Livestock Marketing Contract
b. Breeding Stock Leasing Contract
c. Production Payment A Contract
d. Production Payment B Contract
e. none of the above

_____ 2. A farmer that finishes feeder pigs for another person and receives 2¢/lb. of gain has which of the following contracts:

a. Feeder Livestock Marketing Contract
b. Breeding Stock Leasing Contract
c. Production Payment A Contract
d. Production Payment B Contract
e. none of the above

_____ 3. The contractor assumes all of the price and production risk in the typical Feeder Livestock Marketing Contract. True or False

_____ 4. Most forward contract (livestock) prices are offered on the basis of the Chicago Mercantile futures price. True or False

_____ 5. Most forward contracts (livestock) are:

a. for market hogs
b. for slaughter cattle
c. for feeder cattle
d. a and b above
e. b and c above

_____ 6. If July futures are $40.00/cwt.; most forward contracts for hogs for July will be priced at $_____.

_____ 7. Advantages to the farmer of forward contracting are:

a. permits selling at known price
b. avoids putting up margin money
c. avoids basis change
d. all of the above
e. none of the above

_____ 8. A farmer has more flexibility in her or his marketing with forward contracts than with the futures market. True or False

_____ 9. Generally the more risk assumed by the farmer, the greater the profit/loss potential. True or False

_____10. A farmer that finishes purchased feeder pigs should contract their sale prior to buying the pigs. True or False

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UNIT - MARKETING

Lesson 13 - How can I market livestock with a protected price?

ANSWERS TO EXAM

1. a
2. c
3. False
4. True
5. d
6. $37.50
7. d
8. False
9. True
10. False

UNIT - MARKETING

Lesson 14 - What is the use of the futures market in livestock marketing?

Objective: At the conclusion of the lesson, students will be able to market their livestock by using futures transactions.

Study Questions:

1. What is the difference between hedging and speculating?
2. Explain how you complete a futures transaction.
3. What happens if the market goes up? Down?
4. What is margin money?

References:

1. Student Reference in Agricultural Marketing
2. Handout

   HO-29: Hedging Transaction

UNIT - MARKETING

Lesson 14 - What is the use of futures market in livestock marketing?

TEACHING PROCEDURE

A. Review

B. Motivation: How many of you have ever traded on the futures market? Can anyone use the futures market? Are increased profits guaranteed through use of futures markets?

C. Assignment

D. Supervised study

E. Discussion:

1. This is an important point. Let students give their definitions and discuss. Most farmers think as speculators and it is difficult to think as a hedger. Most are trying for the high price for the year rather than a profitable price and basing production decisions on it.

   What is the difference between hedging and speculating?

   1) Hedging is locking in a price - reduces risk
   2) Speculating is planning for price changes to make a profit - increases risk

2. This often confuses students. It is suggested that it be kept simple at this point. Use the example in the answer below for a farmer with a price objective of $44.00/cwt. for hogs in July. If time permits, use the Daily Market Summary to work an example for a future month.

   Explain how you complete a futures transaction.

   1) The transaction might appear as follows:

	Cash	Futures
January----	Has 175 pigs on hand to market in July - wants $44.00	Sells July contract for $46.00
July------	Sells 136 hogs locally @ $44.00	Buys July contracts at $46.00
Profit/Loss	-0-	-0-

In this example, price was exactly at the price objective. There was no profit or loss on either the cash or futures transaction. The futures contract didn't help in this case except that it provided protection - the cost was only the interest on the margin money and the commission. We might view it as an insurance premium "covering" a guaranteed price. In actual practice, the markets would never work as in this example.

3. The discussion for this question will get to the reasons for hedging. Again, the examples below can be used and relate it to a current example from the Daily Market Summary.

What happens if the market goes up? Down?

1) Complete the problem for both an up and down market

UP MARKET

	Cash	Futures
January---	Has 175 pigs on hand to market in July - wants $44.00	Sells July contract for $46.00
July------	Sells 136 hogs locally @ $48.00	Buys July contract @ $50.00
	Profit $ 4.00	Loss $ 4.00

Nets $44.00 (the price objective)

DOWN MARKET

	Cash	Futures
January---	Has 175 pigs on hand to market in July - wants $44.00	Sells July contract for $46.00
July------	Sells 136 hogs locally @ $40.00	Buys July contract @ $42.00
	Loss $ 4.00	Profit $ 4.00

Nets $44.00 (the price objective)

This is called a perfect hedge and again rarely occurs. Discussion of basis in Lesson 15 will point out problems with basis.

4. Discuss margin money - reason for it - actual cost of it - amount needed - need for making arrangements for it. In a true hedging situation, it is probably not significant; however, hedgers don't like to continue adding margin money.

   What is margin money?

   1) Good faith money or assurance that you will complete the contract. The person on the other side of the contract also deposited margin money to protect you.

F. Summary

G. Exam and/or evaluation

HEDGING TRANSACTION

Perfect Hedge--Price exactly at the price objective

Date	Cash	Futures
January	Has 175 pigs on hand to market in July-wants $44.00	Sells July contract for $46.00
July	Sells 136 hogs locally @ $44.00	Buys July contract @ $46.00
Profit/Loss	-0-	-0-

Perfect Hedge--Up Market

Date	Cash	Futures
January	Has 175 pigs on hand to market in July-wants $44.00	Sells July contract for $46.00
July	Sells 136 hogs locally @ $48.00	Buys July contract @ $50.00
	Profit $4.00	Loss $4.00

Nets $44.00 (the price objective)

Perfect Hedge--Down Market

Date	Cash	Futures
January	Has 175 pigs on hand to market in July-wants $44.00	Sells July contract for $46.00
July	Sells 136 hogs locally @ $40.00	Buys July contract @ $42.00
	Loss $4.00	Profit $4.00

Nets $44.00 (the price objective)

Perfect Hedge--Widening Basis

Date	Cash	Futures
January	Has 175 pigs on hand to market in July-wants $44.00	Sells July contract for $46.00
July	Sells 136 hogs locally @ $38.50	Buys July contract @ $42.00
	Loss $5.50	Profit $4.00

Nets $42.50 ($1.50 lower than price objective)

UNIT - MARKETING

Lesson 14 - What is the use of the futures market in livestock marketing?

EXAM

_____ 1. The use of futures contract has increased compared to 5 years ago. True or False

_____ 2. A speculator is one who locks in a price with the futures market. True or False

_____ 3. A "perfect hedge" has the same profit (loss) in the futures market as there is loss (profit) in the cash market. True or False

_____ 4. "Basis" for hogs is about $_____ in our community.

_____ 5. Margin money is :

a. good faith money
b. required on all futures contracts
c. returned when the contract is lifted
d. all of the above
e. none of the above

UNIT - MARKETING

Lesson 14 - What is the use of the futures market in livestock marketing?

ANSWERS TO EXAM

1. True
2. False
3. More
4. Use local price
5. d

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UNIT - MARKETING

Lesson 15 - Why is basis so important?

Objective: At the conclusion of the lesson, students will be able to determine their local basis.

Study Questions

1. What is basis? Your local basis?
2. Why is basis so important?
3. How much should a farmer hedge or contract?
4. How do you set your price objective?

References:

1. Student Reference in Agricultural Marketing
2. Handouts
   a. HO-30: Sample Hedging Problem
   b. HO-31: Buying Pigs
   c. HO-32: Placing Hedge
   d. HO-33: Profit (Loss) Analysis
   e. HO-34: Futures Price - July 1977 Hogs

UNIT - MARKETING

Lesson 15 - Why is basis so important?

TEACHING PROCEDURE

A. Review

B. Motivation: What is basis? Is there a difference between livestock and grain basis? What is the local basis for this area?

C. Assignment

D. Supervised study

E. Discussion

1. Discuss "basis" so students understand it. Refer to the futures price for a nearby month and by checking with a local hog buying station determine the local basis. Preferably, chart this daily until the contract closes so students will see the importance of basis. Livestock basis are more stable than grain basis, but are still important.

Why is basis so important?

1) Using the example in Lesson 14 for a widening basis market, the effect of basis can be demonstrated.

	Cash	Futures
January---	Has 175 pigs on hand to market in July - wants $44.00	Sells July contract for $46.00
July------	Sells 136 hogs locally @ $38.50	Buys July contract @ $42.00
	Loss $ 5.50	Profit $ 4.00

Nets $42.50 ($1.50 lower than price objective)

In this example, the cash market dropped $1.50 the day the hogs were sold and the futures were steady. If delivery is too far in advance of contract dates, this can happen. The opposite could also occur, if the farmer sold his or her hogs on an up cash market and bought futures that were still steady.

2. The example in question 1 points out the importance of basis. Students should understand they have the alternative of delivering their hogs against the contract in case the basis goes against them. (This works if the hogs are ready for market in a contract month.)

Why is basis so important?

1) Basis determines the specific price received.

3. Be sure students discuss from a hedging viewpoint rather than that of a speculator. A hedger is trying to eliminate most of the price risk while a speculator is increasing price risk - both in the hopes of making a profit.

How much should a farmer hedge or contract?

1) Some farmers have the livestock on hand prior to hedging or contracing (they do not hedge unborn pigs or cattle not purchased, etc.)
2) Most hedge or contract a part of their production. A general guide is to have 150-175 pigs planned for market in the month to fill a 30,000# contract (about 136 hogs). Half of this for a 15,000# contract
3) Will vary by ability to withstand price reverses

4. Let students discuss these three procedures. Then, work through examples. Use HO-28 in Lesson 13 to determine the profitability. Next, use the most recent Hog Outlook prepared by Dr. Grimes at UMC to compare the fundamentals. The Daily Market Summary can be used to practice charting of future prices. Students could then be given the assignment on HO-30 to HO-33. Select a source of feeder pigs reported in the Daily Market Summary and a time that fits the local schedule. Refer to HO-34 for an example of one contract month (July, 1977). HO-34 gives an example of daily futures prices for one contract month; the basis (difference between futures and cash) can be determined; and a method of charting can be used.

How do you set your price objective?

1) Profitability
2) Fundamentals
3) Charting

F. Summary

G. Exam and/or evaluation

ASSIGNMENT

A. Sample Hedging Problem:

1. You may buy feeder pigs at _____ feeder pig sale any time using Missouri Department of Agriculture prices for #1 and 2 pigs.

2. You may or may not hedge - may hedge 1 contract only; two; or more. More involves speculation.

3. Buy back contracts day you sell hogs.

4. You may choose not to feed hogs - there is a $1,050 overhead cost though.

5. At the last meeting, everyone chip in and buy _____ for the one with most profit?

6. Use attached forms for information, etc.

7. Must do early enough to sell before last class.

B. Chart June Hogs and Cash Hogs (Weekly) from now until June (or other appropriate month).

BUYING PIGS

I bought 300 head on _____ (date), weighed _____ (40, 50, 60)#

and gave _____¢/lb. for them.

It will take 792# feed for 40# pig

754# feed for 50# pig

716# feed for 60# pig

Market date is 126 days for 40# pig

120 days for 50# pig

113 days for 60# pig

or following market day if a non-market day.

Give to: Your Teacher

the day after you buy the pigs.

Name _____

PLACING HEDGE

I $\frac{\text{sold}}{\text{bought}}$ _____ of contracts at $ _____
(number)

on _____.
(date)

You may contract any number (over two would be speculating) or you could do one on one date and another on a different date.

Give this to your teacher within one day of making the decision.

PROFIT (LOSS) ANALYSIS

Cash

Sale of 300 head - 230# hogs[1] $_____

Cost of:

300 pigs	_____
Feed	_____
Pisc ($4/pig)	_____
Overhead	$1050

Total Costs $_____

Profit $_____

Futures[4]

Sale:

___contract @ $_____=$_____

___contract @ $_____=$_____

___contract @ $_____=$_____

Total Sale $_____

Bought[3]

___contract @ $_____=$_____

Commission ($30/contract) =$_____

Interest on Margin[2] $_____

Total Costs $_____

Profit $_____

Total Profit $_____

[1]Average bulk sales at _____ on date sold, as reported by MDA.

[2]Figure 10¢/day/contract for interest on margin for this problem.

[3]Buy all contracts on date you sell your hogs.

[4]Future contract prices at days close as reported by MDA.

FUTURES PRICE - JULY 1977 HOGS
1976-1977

DATE	JULY '77 FUTURES PRICE	10 DAY FUTURES AVERAGE	3 DAY FUTURES AVERAGE	CASH PRICE INTERIOR MO. HOGS
Dec. 3	34.27			34.40
Dec. 6	34.97			35.50
Dec. 7	34.25			36.75
Dec. 8	34.22			37.25
Dec. 9	34.30			37.25
Dec. 10	33.72			37.75
Dec. 13	33.37			37.25
Dec. 14	33.97			37.25
Dec. 15	34.35			38.25
Dec. 16	34.35	34.18	34.22	38.90
Dec. 17	34.60	34.21	34.43	39.40
Dec. 20	35.50	34.26	34.82	39.75
Dec. 21	37.15	34.55	35.75	39.00
Dec. 22	35.32	34.66	35.99	37.65
Dec. 27	38.32	35.07	36.93	39.40
Dec. 28	38.55	35.55	37.40	38.50
Dec. 29	38.27	36.04	38.38	38.50
Dec. 30	38.22	36.46	38.55	37.75
Jan. 3	37.77	36.80	38.09	37.25
Jan. 4	37.95	37.17	37.98	36.75
Jan. 5	37.57	37.46	37.76	37.50
Jan. 6	37.55	37.67	37.69	38.50
Jan. 7	37.55	37.71	37.56	38.00
Jan. 10	37.70	37.94	37.60	38.75
Jan. 11	37.17	37.83	37.47	39.75
Jan. 12	37.25	37.70	37.37	37.50
Jan. 13	37.05	37.58	37.16	38.25
Jan. 14	36.40	37.40	36.90	39.00
Jan. 17	36.87	37.31	36.77	39.25
Jan. 18	36.60	37.17	36.62	39.00
Jan. 19	37.57	37.17	37.01	39.00
Jan. 20	37.90	37.21	37.36	39.15
Jan. 21	37.90	37.24	37.79	39.65
Jan. 24	37.17	37.09	37.32	38.90
Jan. 25	38.10	37.18	37.39	37.40
Jan. 26	38.20	37.28	37.49	37.90
Jan. 27	38.00	37.37	38.10	39.65
Jan. 28	37.87	37.52	38.02	39.90
Jan. 31	37.80	37.61	37.89	39.15
Feb. 1	38.05	37.76	37.91	38.90
Feb. 2	38.47	37.85	38.11	37.90
Feb. 3	38.42	37.90	38.31	38.90
Feb. 4	39.35	38.04	38.75	39.40
Feb. 7	39.07	38.33	38.95	38.75
Feb. 8	39.57	38.48	39.33	39.25
Feb. 9	39.22	38.58	39.29	39.25
Feb. 10	39.70	38.75	39.50	39.75
Feb. 14	39.40	38.91	39.44	40.00

DATE	JULY '77 FUTURES PRICE	10 DAY FUTURES AVERAGE	3 DAY FUTURES AVERAGE	CASH PRICE INTERIOR MO. HOGS
Feb. 15	39.25	39.05	39.45	40.25
Feb. 16	38.85	39.13	39.17	39.25
Feb. 17	39.10	39.19	39.07	39.25
Feb. 18	39.15	39.27	39.03	38.75
Feb. 22	39.32	39.26	39.19	38.50
Feb. 23	39.15	39.27	39.21	38.50
Feb. 24	38.52	39.17	39.00	39.75
Feb. 25	37.65	39.01	38.44	38.75
Feb. 28	37.52	38.79	37.90	38.00
Mar. 1	38.17	38.67	37.78	37.25
Mar. 2	38.15	38.56	37.95	38.25
Mar. 3	37.95	38.47	38.09	38.25
Mar. 4	38.45	38.40	38.18	37.75
Mar. 7	38.02	38.29	38.14	37.00
Mar. 8	38.25	38.18	38.24	36.50
Mar. 9	38.62	38.13	38.30	36.75
Mar. 10	39.07	38.19	38.65	37.00
Mar. 11	39.45	38.37	39.05	36.75
Mar. 14	39.75	38.59	39.42	37.25
Mar. 15	41.20	38.89	40.13	36.25
Mar. 16	41.55	39.23	40.83	36.50
Mar. 17	41.37	39.57	41.37	36.25
Mar. 18	41.20	39.85	41.37	36.00
Mar. 21	41.50	40.20	41.36	35.25
Mar. 22	41.42	40.51	41.37	35.75
Mar. 23	40.22	40.67	41.05	36.25
Mar. 24	40.12	40.78	40.59	35.25
Mar. 28	39.60	40.79	39.98	35.25
Mar. 29	39.70	40.79	39.81	35.50
Mar. 30	40.22	40.69	39.84	34.50
Mar. 31	40.72	40.61	40.21	34.50
Apr. 1	40.77	40.55	40.57	34.75
Apr. 4	40.90	40.52	40.80	35.00
Apr. 5	42.30	40.60	41.32	34.50
Apr. 6	42.30	40.69	41.83	34.50
Apr. 7	43.65	41.03	42.75	34.50
Apr. 8	43.65	41.38	43.20	34.75
Apr. 11	44.02	41.82	43.77	35.50
Apr. 12	44.07	42.26	43.91	35.50
Apr. 13	44.87	42.73	44.32	36.00
Apr. 14	44.02	43.06	44.32	36.00
Apr. 15	44.77	43.46	44.55	35.50
Apr. 18	44.72	43.84	44.50	35.25
Apr. 19	44.95	44.10	44.81	35.50
Apr. 20	44.45	44.32	44.71	35.25
Apr. 21	44.70	44.42	44.70	35.75
Apr. 22	44.32	44.49	44.49	35.25
Apr. 25	45.10	44.60	44.71	35.50
Apr. 26	45.50	44.74	44.97	36.65
Apr. 27	44.62	44.72	45.07	37.50

FUTURES PRICE - JULY 1977 HOGS
1976-1977

DATE	JULY '77 FUTURES PRICE	10 DAY FUTURES AVERAGE	3 DAY FUTURES AVERAGE	CASH PRICE INTERIOR MO. HOGS
Apr. 28	44.40	44.75	44.84	37.00
Apr. 29	45.22	44.80	44.75	37.00
May 2	46.72	45.00	45.45	37.50
May 3	46.20	45.12	46.05	37.25
May 4	46.52	45.33	46.48	37.25
May 5	47.62	45.62	46.78	37.25
May 6	47.10	45.90	47.08	38.25
May 9	47.77	46.17	47.50	39.50
May 10	47.12	46.33	47.33	39.90
May 11	46.75	46.54	47.21	41.25
May 12	46.40	46.74	46.76	41.25
May 13	46.72	46.89	46.62	42.25
May 16	45.57	46.78	46.23	42.65
May 17	45.90	46.75	46.06	41.75
May 18	47.25	46.82	46.24	43.25
May 19	46.82	46.74	46.66	43.25
May 20	45.60	46.59	46.56	42.60
May 23	46.05	46.42	46.16	42.25
May 24	45.70	46.28	45.78	41.50
May 25	45.90	46.19	45.88	42.00
May 26	46.32	46.18	45.97	42.25
May 27	46.10	46.12	46.11	42.12
May 31	46.55	46.22	46.32	42.25
Jun. 1	45.45	46.17	46.03	41.75
Jun. 2	46.35	46.08	46.12	41.75
Jun. 3	47.70	46.17	46.50	41.75
Jun. 6	47.57	46.37	47.21	42.75
Jun. 7	47.42	46.51	47.56	42.00
Jun. 8	47.25	46.66	47.41	42.00
Jun. 9	45.75	46.65	46.81	42.50
Jun. 10	44.52	46.47	45.84	41.50
Jun. 13	44.75	46.33	45.01	42.75
Jun. 14	44.52	46.13	44.60	42.40
Jun. 15	45.15	46.10	44.81	42.90
Jun. 16	45.55	46.02	45.07	43.00
Jun. 17	45.47	45.80	45.39	42.75
Jun. 20	46.77	45.72	45.93	43.25
Jun. 21	45.75	45.55	46.00	43.15
Jun. 22	45.75	45.40	46.09	43.15
Jun. 23	45.57	45.38	45.69	43.65
Jun. 24	47.07	45.64	46.13	44.15
Jun. 27	47.45	45.91	46.70	44.90
Jun. 28	47.12	46.17	47.21	44.90
Jun. 29	47.12	46.36	47.23	45.00
Jun. 30	47.90	46.60	47.38	45.00
Jul. 1	48.32	46.88	47.78	45.40
Jul. 5	48.12	47.02	48.11	46.50
Jul. 6	48.57	47.30	48.34	47.00
Jul. 7	47.90	47.51	48.20	47.25
Jul. 8	47.95	47.75	48.14	47.00
Jul. 11	47.67	47.81	47.84	46.00
Jul. 12	47.62	47.83	47.75	45.25
Jul. 13	48.12	47.93	47.80	45.65
Jul. 14	48.12	48.03	47.95	46.15
Jul. 15	47.15	47.95	47.80	45.65
Jul. 18	47.45	47.87	47.57	45.15
Jul. 19	48.15	47.87	47.58	45.00
Jul. 20	46.95	47.71	47.52	44.65

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UNIT - MARKETING

Lesson 15 - Why is basis so important?

EXAM

_____ 1. What was the farmer's price in the following transaction:

	Cash	Futures
March----	Has 175 pigs on hand to market in July - wants $40.00/cwt.	Sells July contract @ $43.00
July-----	Sells 136 hogs locally @ $41.50	Buys July contract @ $44.00
Profit/Loss	$_____	$_____
		Nets $_____

_____ 2. If basis (narrows, widens) by delivery, the farmer will net more for the hogs than had been planned.

_____ 3. A good manager will hedge 100% of the anticipated production. True or False

_____ 4. Three methods have been suggested as guides as to what price to hedge. These are:

a._____

b._____

c._____

_____ 5. A young farmer with large debts would be more interested in price protection than an older debt-free farmer. True or False

UNIT - MARKETING

Lesson 15 - Why is basis so important?

ANSWERS TO EXAM

1. $40.50
2. Narrows
3. False
4. a. Profitability
   b. Fundamentals
   c. Charting
5. True

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UNIT - MARKETING

Lesson 16 - What are some alternative livestock marketing methods?

Objective: At the conclusion of the lesson, students will be able to select the proper marketing alternative to fit their particular marketing problem.

Study Questions:

1. What are your alternatives if futures are too low to hedge?

2. Who should use price protection?

References:

1. Student Reference in Agricultural Marketing

UNIT - MARKETING

Lesson 16 - What are some alternative livestock marketing methods?

TEACHING PROCEDURE

A. Review

B. Motivation: Have any of you had the problem of futures being too low to hedge? Have you ever used price protection? What are some of your alternatives in marketing?

C. Assignment

D. Supervised study

E. Discussion:

1. Many times when working budgets it will be obvious that there is no profit at present feeder pig prices and futures. What do you do now? Let students discuss alternatives and the implications of these.

What are your alternatives if futures are too low to hedge?

1) Stay out of business (fixed costs continue)
2) Buy pigs and stay unhedged (speculating)

2. Let them list these groups. Also, let them give an evaluation of their personal needs as related to this question. Do they fit any of these groups?

Who should use price protection?

1) Young farmer with large debts and payments
2) Those uncomfortable with risks
3) Those in expansion phase of an enterprise
4) Those expecting market to decline
5) Those most interested in steady-level income

F. Summary

G. Exam and/or evaluation:

1. Sample Quiz

UNIT - MARKETING

Lesson 16 - What are some alternative livestock marketing methods?

EXAM

_____ 1. Hedging will guarantee a profit. True or False

_____ 2. A continuous marketing program (selling hogs every two weeks) creates more need for price protection than if selling two times per year. True or False

_____ 3. Two possible alternatives to use when futures are too low to hedge a profit are:

a._____

b._____

_____ 4. A young farmer with large debts and high payments would probably want enough price protection to at least cover his/her principal and interest payments. True or False

_____ 5. A person that can stand price risk is the one that can use marketing alternatives to an advantage. True or False

UNIT - MARKETING

Lesson 16 - What are some alternative livestock marketing methods?

ANSWERS TO EXAM

1. False
2. False
3. a. Don't buy feeders and stay out of business
   b. Buy feeders and remain unhedged
4. True
5. False

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UNIT - MARKETING

Lesson 17 - What are marketing and pricing methods for milk?

Objective: At the conclusion of the lesson, students will understand pricing and marketing methods of milk.

Study Questions:

1. Why should producers understand pricing and marketing?
2. Why did prices fluctuate widely in prior years?
3. What role does "health" play in milk marketing?

References:

1. Student Reference in Agricultural Marketing
2. Marketing Farm Products, Shepherd, Futrell and Strain, pages 330-372.

UNIT - MARKETING

Lesson 17 - What are marketing and pricing methods of milk?

TEACHING PROCEDURE

A. Review

B. Motivation: Does anyone know how milk is marketed? How does the farmer determine the price she or he is to receive for her or his product?

C. Assignment

D. Supervised study

E. Discussion:

1. Have students discuss why they need to understand marketing and pricing. Usually, they relate to the need to provide information to consumers.

   Why should producers understand pricing and marketing?

   1) To have an influence on their cooperatives and marketing orders
   2) To enable them to make informed decisions on their own plans
   3) To inform consumers to ensure an adequate supply of milk at reasonably stable prices

2. Let students explain the background that caused the widely fluctuating prices.

   Why did prices fluctuate widely in prior years?

   1) Reserve supplies
   2) Reserve supplies were necessary to have adequate amounts on a daily basis
   3) Demand for milk is inelastic
   4) Production changes slowly
   5) Seasonally changing supply versus relative stable demand

3. Discuss examples of health problems in prior years and let students give some of their experiences in this area.

   What role does "health" play in milk marketing?

1) Sanitary inspections are required for fluid milk (Grade A)
2) These inspections influence the number of producers willing to meet standards.

F. Summary

G. Exam and/or evaluation

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UNIT - MARKETING

Lesson 17 - What are marketing and pricing methods of milk?

EXAM

_____ 1. Characteristics of milk marketing are:

a. milk cannot be stored and is highly perishable
b. reserve supplies are needed for bottling milk
c. demand is more stable than supply
d. a and b above
e. a, b, and c above

_____ 2. Health regulations in milk marketing are necessary to protect the public health. True or False

_____ 3. Health regulations influence the number of producers supplying a certain market. True or False

_____ 4. Filth and adulteration of milk are major problems today. True or False

_____ 5. The most rapid methods of increasing milk production are to increase quantity of feed fed and to cull fewer cows. True or False

UNIT - MARKETING

Lesson 17 - What are marketing and pricing methods of milk?

ANSWERS TO EXAM

1. e
2. True
3. True
4. False
5. True

UNIT - MARKETING

Lesson 18 - How are dairy products marketed?

Objective: At the conclusion of the lesson, students will be able to determine the price for manufacturing milk.

Study Questions:

1. What categories are used in milk marketing?
2. Why is it important to have "classes" for fluid milk?
3. Discuss how the price for manufacturing milk is determined.
4. What is the Minnesota-Wisconsin Price Series?

References:

1. Student Reference in Agricultural Marketing
2. Marketing Farm Products, Shepherd, Futrell and Strain pages 330-372.
3. Transparencies
   a. TM-25: Marketing Milk
   b. TM-26: Changes in Per Capita Dairy Product Sales, 1964-74

UNIT - MARKETING

Lesson 18 - How are dairy products marketed?

TEACHING PROCEDURE

A. Review

B. Motivation: What price did you receive for milk last month? How was this price determined?

C. Assignment

D. Supervised study

E. Discussion

1. Use TM-25 as students discuss the kinds of milk markets.

What categories are used in milk marketing?

1) Fluid (Grade A)

a. Class I - bottling milk
b. Class II - soft products
c. Class III - hard products

2) Manufacturing

a. Hard - cheese, butter, dried, etc.
b. Soft - eggnog, cottage cheese, yogurt, etc.

2. Let students discuss this point. They should understand that the price for an entire production is at the price of the last unit. Just a small amount of over-production drops the price on the entire production. And, some over-production is necessary in bottling milk so the consumer can always go to the store and purchase milk.

Why is it important to have "classes" for fluid milk?

1) Assures adequate supplies
2) Prevents surplus of bottling milk
3) Any extra milk goes into "storable" products

3. Write examples of factors that affect supply and demand on the board as students list them. They may have additional ones to those in the text. Also, discuss the effect of the support prices over market price (quantity being purchased by Commodity Credit Corporation is increasing rapidly in 1977). Also, use TM-26 to show changes in demand.

   Discuss how the price for manufacturing milk is determined.

   1) Based on supply:demand.
   2) Government support prices may provide an artificial demand.
   3) Milk plants will eventually go out of business if they pay above paying ability.
   4) Milk plants will eventually "lose" all their producers to competitors if they pay below paying ability.

4. Let students explain this since it will be used in pricing fluid milk.

   What is the Minnesota-Wisconsin Price Series?

   1) Monthly average of prices paid in Minnesota and Wisconsin
   2) Used as an indication of the value of manufacturing milk since over 50% of the U. S. milk is produced in these two states

F. Summary

G. Exam and/or evaluation

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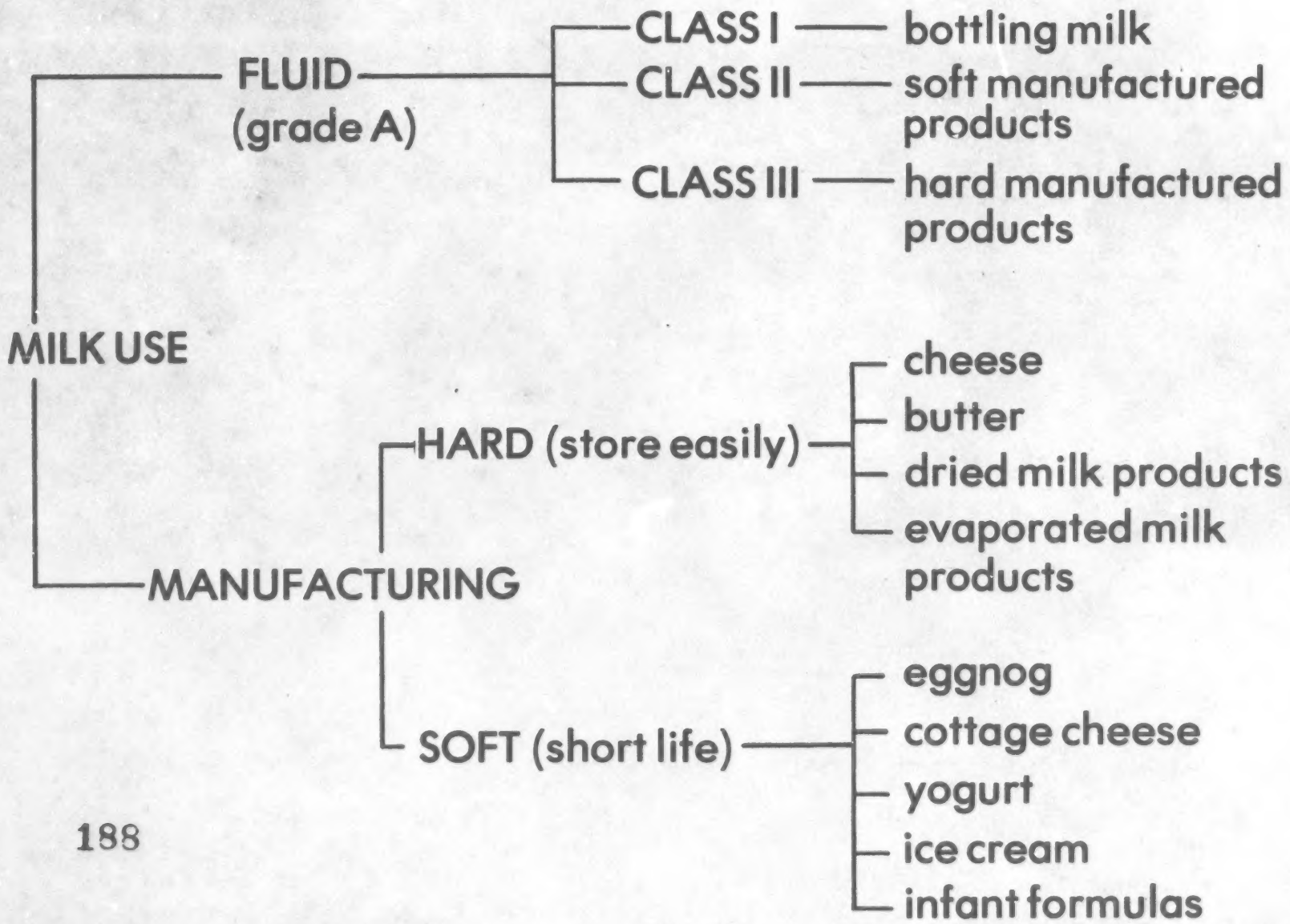
MARKETING MILK



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TM-25

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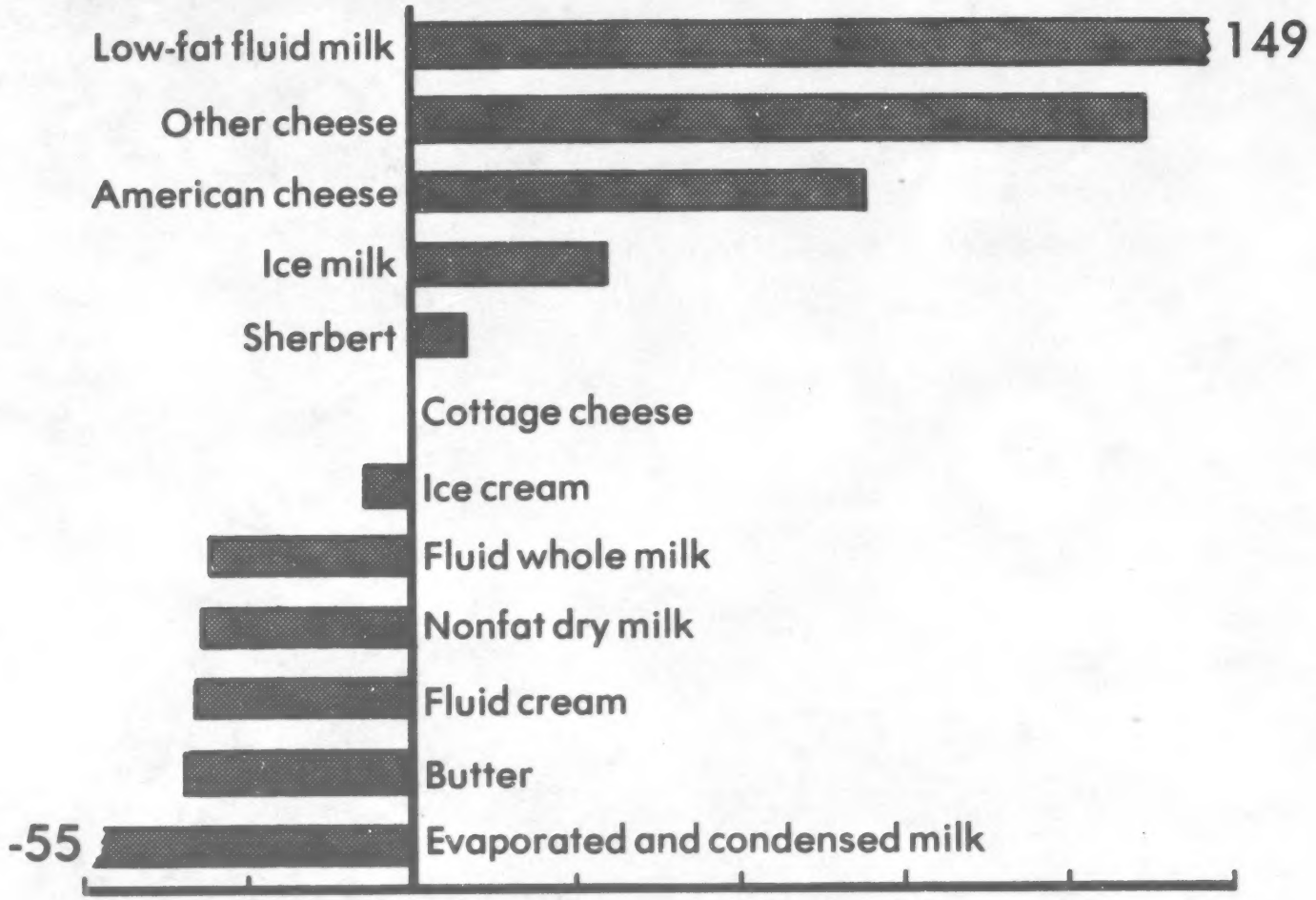
CHANGES IN PER CAPITA DAIRY PRODUCT SALES, 1964-74



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TM-26

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UNIT - MARKETING

Lesson 18 - How are dairy products marketed?

EXAM

_____ 1. Milk is marketed in two categories: manufacturing and fluid. True or False

_____ 2. Examples of "hard" manufactured milk products are:

a. butter
b. dried milk
c. cottage cheese
d. a and b above
e. a, b, and c above

_____ 3. Fluid milk is marketed in three classes:

a. Grade A
b. Grade B
c. Grade C
d. all of the above
e. none of the above

_____ 4. Class II milk is used for soft manufactured products. True or False

_____ 5. Surplus milk for bottling use is normally carried over about a week. True or False

_____ 6. A local processing plant is limited on price it can pay for manufacturing milk by:

a. price of their product
b. yield obtained
c. cost of handling and manufacturing
d. all of the above
e. none of the above

_____ 7. Over half of the manufacturing milk in the U. S. is produced in Minnesota and Wisconsin. True or False

_____ 8. The Minnesota-Wisconsin Price is determined by supply: demand. True or False

_____ 9. A government support price for Minnesota-Wisconsin milk will affect the fluid-blend price. True or False

_____10. A government support price above the "normal" Minnesota-Wisconsin price will cause a surplus of dairy products. True or False

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UNIT - MARKETING

Lesson 18 - How are dairy products marketed?

ANSWERS TO EXAM

1. True
2. d
3. e
4. True
5. False
6. d
7. True
8. True
9. True
10. True

UNIT - MARKETING

Lesson 19 - How is the fluid and blend price for milk determined?

Objective: At the conclusion of the lesson, students will be able to determine fluid price and blend price for milk.

Study Questions:

1. What are milk marketing orders?
2. Discuss how fluid milk price is determined.
3. What is blend price?
4. What differentials are applied to the blend price?
5. How does the fluid price respond to supply:demand?

References:

1. Student Reference in Agricultural Marketing
2. Marketing Farm Products, Shepherd, Futrell and Strain, pages 330-372.
3. Transparency

   TM-27: Milk Marketing Areas Under Federal Orders as of January 1, 1975.
4. Handout

   HO-35: Blend Price - Milk

UNIT - MARKETING

Lesson 19 - How is the fluid and blend price for milk determined?

TEACHING PROCEDURE

A. Review

B. Motivation: Do you know in what class your milk is sold? What did you receive for a blend price?

C. Assignment

D. Supervised study

E. Discussion:

1. Use TM-27 to show locations of milk marketing orders in the United States. Discuss how they are formed and identify the one in which students in class are located.

   What are milk marketing orders?

   1) Established by vote of producers
   2) Administered through U. S. D. A.
   3) Three in Missouri

2. Use the bulletin, "Summary of Major Provisions in Federal Milk Marketing Orders," or Market Administrator Reports for local orders to obtain current Class I, II and III price for local producers.

   Discuss how fluid milk price is determined.

   1) Class I differential added to M-W price
   2) Class II differential added to M-W price
   3) Class III is M-W price
   4) Producers receive the above prices for the percentage of milk going into each class.

3. Work a current example of a blend price on the board as students explain how it is determined. Then, let students work a practice problem.

   What is blend price?

   1) The average price for milk in a particular order for a certain pay period.

4. As students suggest these, list them on the board and put current price differential beside them. Determine current pay price for local area for 3.6% milk.

   What differentials are applied to the blend price?

   1) Butterfat - found in bulletin, "Summary of Major Provisions in Federal Milk Marketing Orders"
   2) Location - found in bulletin, "Summary of Major Provisions in Federal Milk Marketing Orders"
   3) Seasonal - found in bulletin, "Summary of Major Provisions in Federal Milk Marketing Orders"

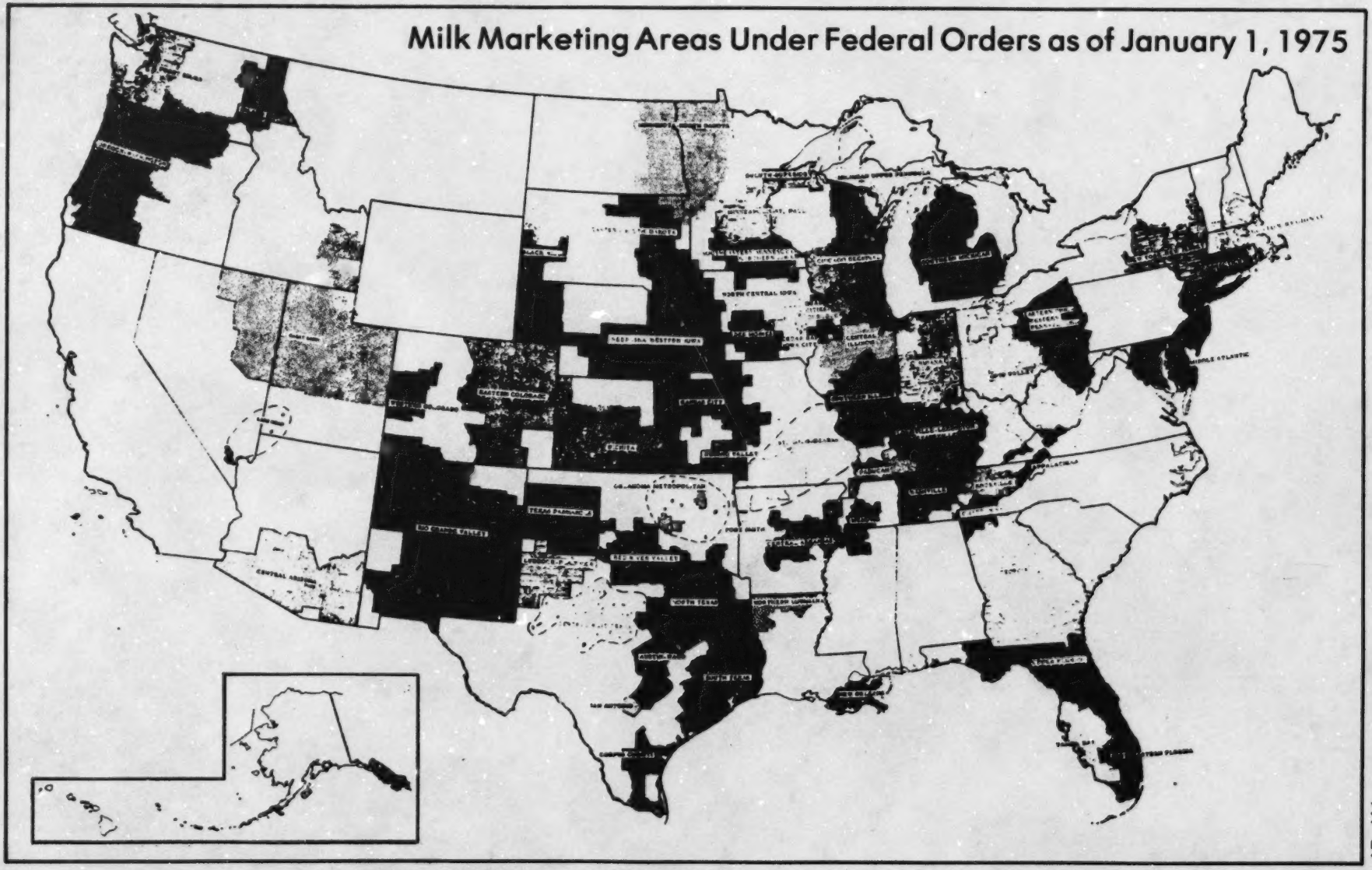
5. Have students discuss to instructor's satisfaction to be sure they have a correct understanding. Also, bring up effect of C.C.C. support price of manufacturing milk and the effect of this on "blend" prices.

   How does the fluid price respond to supply:demand?

   1) Supply:demand of manufacturing products affects M-W price
   2) Class I and II price tied to M-W price
   3) Usage of Class I affected by price
   4) Decrease in demand for bottling milk increases supply of manufacturing milk
   5) Higher Class I utilization will cause a higher blend price

F. Summary

G. Exam and/or evaluation



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TM-27

DIFFERENCES IN SHADING MERELY SERVE TO DIFFERENTIATE BETWEEN MARKETING AREAS

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BLEND PRICE - MILK

A milk marketing order area has the following data at the end of a pay period:

Use Classification	Price Per Cwt.	Percentage in Each Use Classification	B.F. Differential Base B.F. = 3.5%
Class I	$ 10.68	67%	9.3¢
Class II	$ 8.35	14%	9.3¢
Class III	$ 8.25	19%	9.3¢

Question 1: The dollar amount per hundred weight for milk (4.1% B.F.) is approximately:

a. $ 8.70 - $ 9.20
b. $ 9.21 - $ 9.70
c. $ 9.71 - $10.20
d. $10.21 - $10.70
e. none of the above

Question 2: The total dollar amount received by Producer Smith for 41,868# (3.7% B.F.) is between:

a. $4000 - $4200
b. $4201 - $4400
c. $4401 - $4600
d. $4601 - $4800
e. none of the above

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ANSWERS TO HO-35

Question 1: D

10.68 x .67 = 7.16
8.35 x .14 = 1.17
8.25 x .19 = 1.56
$9.89 blend price for 3.5% B.F.

4.1 - 3.5 = .6 points x 9.3 = 55.8¢ (56¢) B.F. differential

9.89 + .56 = $10.45 = D

Question 2: B

$9.89 (blend) + .19 (18.6¢) B.F. = $10.08 pay price

418.68 cwt. x $10.08 = $4220.29 = B

UNIT - MARKETING

Lesson 19 - How is the fluid and blend price for milk determined?

EXAM

_____ 1. The U. S. D. A. sets the M-W Price through Milk Marketing Orders. True or False

_____ 2. Class I milk price is set in relation to the M-W price. True or False

_____ 3. Class II milk price is:

a. about $.10/cwt. over M-W price
b. about $.10/cwt. under Class I
c. about $.10/cwt. under Class III
d. about $1.70/cwt. over Class III
e. none of the above

_____ 4. All producers in a market shed (marketing order area) receive the same blend price. True or False

_____ 5. The following is a hypothetical usage chart for a marketing order for 3.5% milk with a $.10 butterfat differential.

	Milk (cwt.)	Price per cwt.
Class I	300,000	10.00
Class II	200,000	8.40
Class III	100,000	8.30

The blend price is:

a. $8.90/cwt.
b. $9.18/cwt.
c. $9.41/cwt.
d. $8.46/cwt.
e. none of the above

_____ 6. A producer in the above example with 3.8% milk would receive for milk:

a. $9.71/cwt.
b. $9.20/cwt.
c. $9.11/cwt.
d. $9.48/cwt.
e. none of the above

_____ 7. A producer in the above example with 3.3% milk would receive for milk:

a. $9.14/cwt.
b. $8.75/cwt.
c. $9.38/cwt.
d. $8.98/cwt.
e. none of the above

_____ 8. Determine the blend price with the following information: 3.5% milk with a $.10 butterfat differential.

	Milk (cwt.)	Price per cwt.
Class I	400,000	10.00
Class II	100,000	8.40
Class III	100,000	8.30

a. $9.86/cwt.
b. $9.45/cwt.
c. $8.95/cwt.
d. $9.27/cwt.
e. none of the above

_____ 9. Determine the blend price with the following information: 3.5% milk with a $.10 butterfat differential.

	Milk (cwt.)	Price per cwt.
Class I	300,000	10.00
Class II	100,000	8.40
Class III	200,000	8.30

a. $9.17/cwt.
b. $9.07/cwt.
c. $8.95/cwt.
d. $9.45/cwt.
e. none of the avove

_____10. Determine the blend price using the information in problem 9 with a $.10/cwt. location adjustment.

a. $9.22/cwt.
b. $8.67/cwt.
c. $9.07/cwt.
d. $8.93/cwt.
e. none of the above

UNIT - MARKETING

Lesson 19 - How is the fluid and blend price for milk determined?

ANSWERS TO EXAM

1. False
2. True
3. a
4. True
5. b
6. d
7. d
8. b
9. a
10. c

UNIT - MARKETING

Lesson 20 - What marketing decisions are faced by the milk producers?

Objective: At the conclusion of the lesson, students will be able to discuss some of the major marketing decisions faced by the milk producer.

Study Questions:

1. What does a producer need to consider in deciding on selling fluid or manufacturing milk?

2. What method could a producer use to make the decision?

References:

1. Student's Reference in Agricultural Marketing

2. Marketing Farm Products, Shepherd, Futrell, and Strain, pp. 330-372.

3. Transparencies

   a. TM-28: Milk Production, Number of Cows and Milk per Cow

   b. TM-29: Milk-feed Price Relationships

4. Handouts

   a. HO-36: Partial Budget Form

   b. HO-37: Estimated Costs for Dairy Facilities

UNIT - MARKETING

Lesson 20 - What marketing decisions are faced by the milk producer?

TEACHING PROCEDURE

A. Review - lessons 15, 16 and 17.

B. Motivation: As a milk producer, do you have any marketing decisions? Do you sell fluid or manufactured milk? Why?

C. Assignment

D. Supervised study

E. Discussion

1. This question needs to be applied to (a) student(s) in class that plans to be a dairy farmer following high school. Use TM-28 and TM-29 to illustrate trends.

   What does a producer need to consider in deciding on selling fluid or manufacturing milk?

   1) Extra returns
   2) Extra costs
   3) Size of herd
   4) Years planned in dairy business

2. Use HO-36 and HO-37 to help a student(s) decide which is best for the individual situation. Use current prices and actual situations.

   What method could a producer use to make the decision?

   1) Partial Budget (HO-36)
   2) Estimated Prices (HO-37)

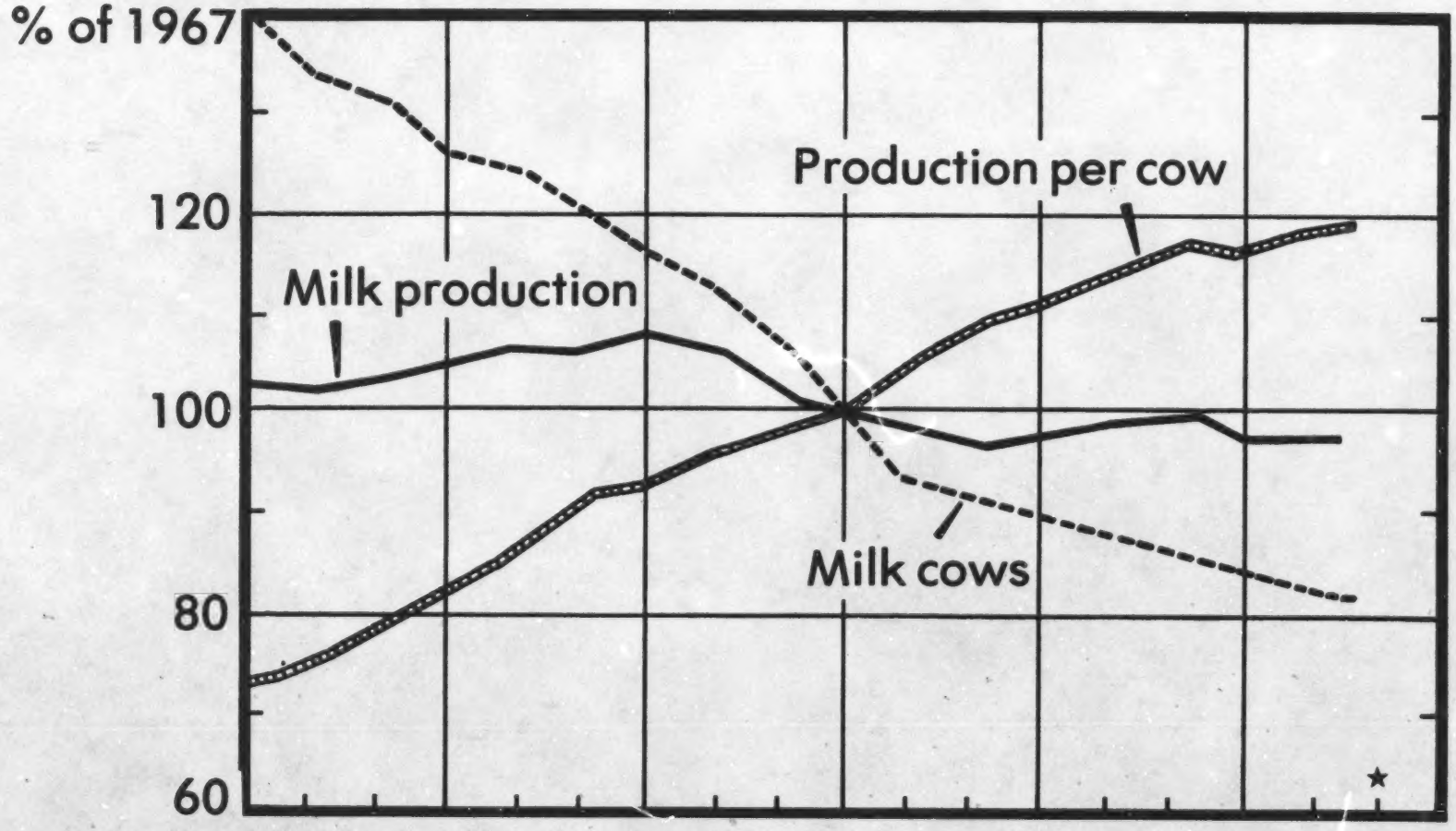
Other Activities:

1. Have Co-op or Milk Plant representatives visit class and discuss marketing.

F. Summary

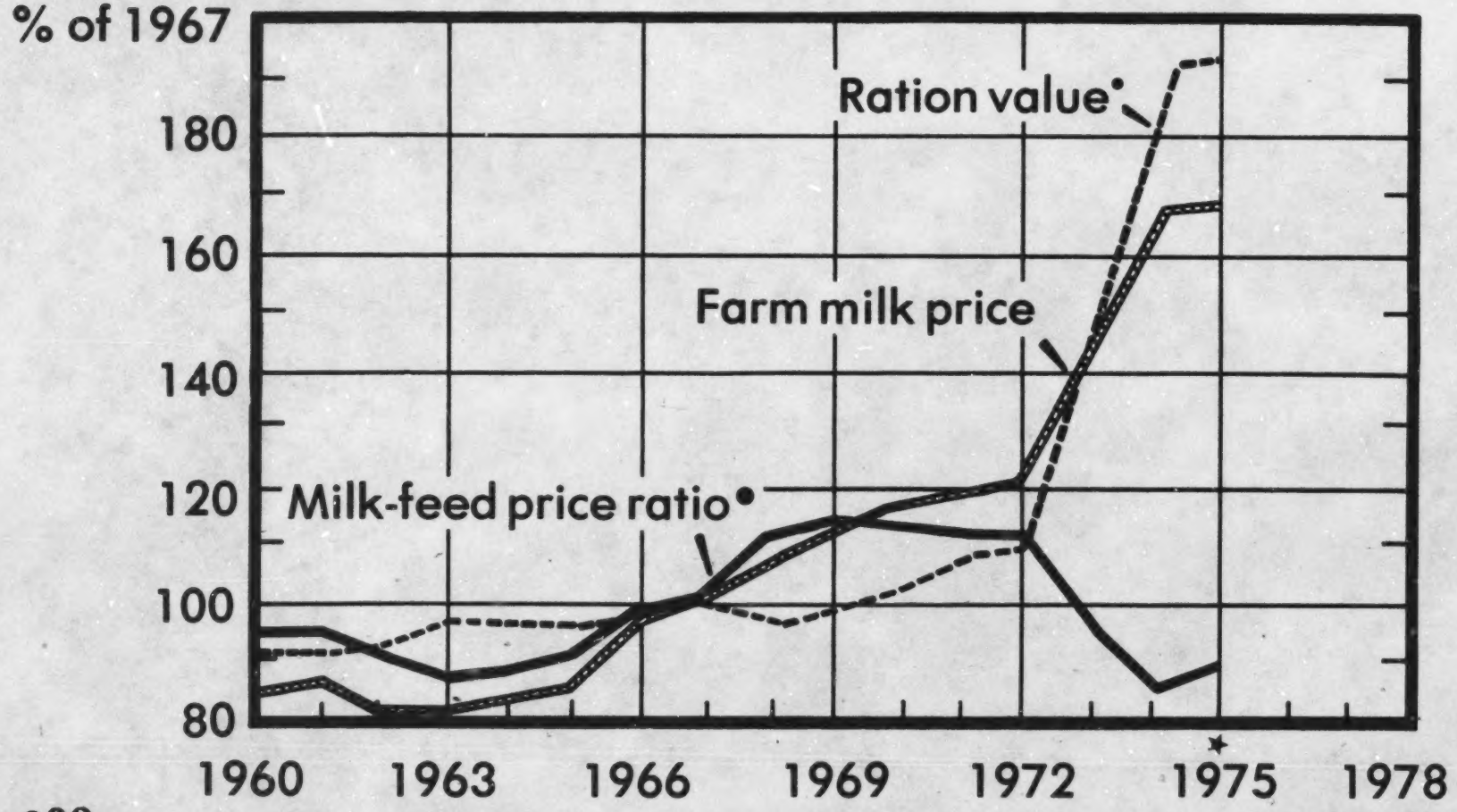
G. Exam and/or evaluation

MILK PRODUCTION, NUMBER OF COWS, AND MILK PER COW



★FORECAST

MILK-FEED PRICE RELATIONSHIPS



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• CONCENTRATE RATION FED TO MILK COWS ★ FORECAST

● POUNDS OF RATION EQUAL IN VALUE TO 1 POUND OF MILK SOLD TO PLANTS

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TM-29

PARTIAL BUDGET FORM

Situation:

Additional Costs	$	Additional Returns	$
Reduced Returns	$	Reduced Costs	$

A. Total Annual Additional Costs and Reduced Returns $_____

B. Total Annual Additional Returns and Reduced Costs $_____

$_____

NET CHANGE IN INCOME (B minus A) $_____

ESTIMATED COSTS FOR DAIRY FACILITIES

Item		Cost*
MILKING BARNS OR PARLORS:		
Double 4, herringbone, 45'x20' including covered holding pen		$ 9,500
Double 3, diagonal parlor, 45'x20' incl. covered holding pen		9,500
Single 6, herringbone, not including holding pen		6,200
Single 6, herringbone stalls & feeding system		3,200
MILKING EQUIPMENT:		
For double 4 herringbone:	4 units, 2" vacuum with feeding system, less storage tank	8,340
	8 units, 3" low line, 2" vacuum with feeding system, less storage tank	14,380
For double 3 diagonal:	3 units, 2" vacuum	7,190
	6 units, 2' vacuum, 3" milk line	9,780
BULK TANKS:		
500 gallon tank, automatic washer & 3 hp compressor		5,040
700 gallon tank, automatic washer & 4 hp compressor		6,115
1,000 gallon tank, automatic washer & dual 3 hp compressor		9,230
1,500 gallong tank, automatic washer & dual 3 hp compressor		10,160
2,000 gallon tank, automatic washer & dual 4 hp compressor		13,000
OTHER ITEMS:		
Water conditioner, 22 grain		280
Cleaning in place unit, need one per milking unit	Each	85
High pressure water pump (for clean-up)		250
Alternator, 15 kw		1,350
Alternator, 25 kw		1,650
Bulk feed storage tank, 8 ton capacity		800
Steel pipe, 2"	Per ft.	6.30
Steel pipe, 3"	Per ft.	9.60
Loafing barn with free stalls & concrete alleys, complete installation	Per stall	$90 to $110
Utah free stalls (open side, 2-way roof)	Per stall	$40 to $60
Concrete for walkways from silage or hay areas to loafing area to parlor (figure 80-100 sq. ft./cow at 70¢/sq. ft.)	Per cow	$60 to $70
Animal waste control facilities	Per cow	$50 to $70
CALF RAISING FACILITIES:		
Individual stalls or calf hutches	Each	$50 to $60
Shed Space after weaning	Per calf	$25 to $30

*Prepared from dealer price lists which include installation in Southwest Missouri, May 1975.

UNIT - MARKETING

Lesson 20 - What marketing decisions are faced by the milk producer?

EXAM

_____ 1. All dairy farmers should market fluid milk rather than manufacturing milk. True or False

_____ 2. The larger the dairy herd and the longer it is planned to stay in business, the more profitable will be the fluid market. True or False

_____ 3. The price of fluid milk has a higher average per hundred than does manufacturing milk. True or False

_____ 4. A partial budget could be used to determine the most profitable method of marketing mix. True or False

_____ 5. A producer that is 25 years of age and plans to stay in the dairy business for 30 years is more likely to choose the manufacturing market than a 55 year old farmer. True or False

UNIT - MARKETING

Lesson 20 - What marketing decisions are faced by the milk producer?

ANSWERS TO EXAM

1. False
2. True
3. True
4. True
5. False